

## Xavier's Resource Centre for the Visually Challenged

St. Xavier's College, 5 Mahapalika Marg, Mumbai - 400001

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# RBI Circular on Accessible ATMs ... 5 years on, a Retrospect and Prospect

Compiled by Xavier's Resource Centre for the Visually Challenged (XRCVC)

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## BACKGROUND

The measure of a civilized society is the manner in which it treats its marginalized persons. A mature and evolved society is one that is truly inclusive and embraces people of different backgrounds and dispositions—be they persons who are economically on the fringes, educationally marginalized, or those with disabilities. It is imperative to empower all sections of society, particularly persons with disabilities and the weakest of the weak, for by empowering such persons you empower the entire family and consequently the locality, region and nation.

Over the past few years, the banking system in India, helmed by Reserve Bank of India (RBI), has come a long way in empowering such persons. RBI circulars and the Indian Banks' Association (IBA) procedural guidelines on inclusive banking have established a strong basis for Inclusive Banking for Disabled Persons, particularly Blind and Low-Vision customers. However, despite these rules, regulations and guidelines, the ground-level reality for such customers of various banks in India continues to remain abysmal. Many such persons continue to be refused access to banking services. In the exceptional cases where they are given access, they experience extremely discriminatory procedures, which contradict the essential spirit of these rules, regulations and guidelines. Clearly, a lot more needs to be done on the



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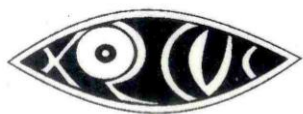
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ground to enable such persons to actualize their potential and live with dignity and fulfillment. For instance, fully accessible bilingual ATMs have the potential to empower not just blind and low-vision persons but also the vast majority of illiterate and semi-literate people across rural, urban and semi-urban areas of India. Such ATMs have great untapped potential in the area of Direct Cash Transfers to the marginalized section of society.

### TIMELINE

1. Up to 2008 the rules stipulated that a blind person wishing to avail of banking services should be treated on par with an illiterate person. On June 4, 2008, the RBI issued a path-breaking circular (RBI/2007-08/358 DBOD.No.Leg BC.91/09.07.005/2007-08) (see Annexure A) directing all Scheduled Commercial Banks to “ensure that all the banking facilities such as cheque book facility including third party cheques, ATM facility, Net banking facility, locker facility, retail loans, credit cards, etc, are invariably offered to the visually challenged without any discrimination”.
2. On November 18, 2008, the Indian Banks' Association (IBA) issued procedural guidelines (vide circular No CE/RB-1/vip/1766) (see Annexure B) to the Chief Executives of all its member banks on providing banking facilities to visually impaired persons.
3. In April 2009, the RBI issued another path-breaking circular (No RBI/2008-09/431 DBOD.No.Leg.BC.123 / 09.07.005 /2008-09) (see Annexure C) making it mandatory “to make at least one-third of new ATMs installed as talking ATMS with Braille keypads...”, the spirit being that these machines should be accessible. In spite of this progress was slow.
4. Around this time, Xavier's Resource Centre for the Visually Challenged (XRCVC) took the initiative to coordinate with the banking industry and ATM vendors to make fully accessible ATMs. The first demonstration of such an ATM was organized on August 12<sup>th</sup>, 2009 in the XRCVC office at St Xavier's College, Mumbai (see Annexure D). These machines were also showcased the same year in St Xavier's College at its annual awareness event, Antarchakshu<sup>TM</sup>. (XRCVC is a state-of-the-art support and advocacy unit working to create an inclusive society for visually challenged people across India. It is a Department of St Xavier's College, Mumbai. To know more about us please visit our website—[www.xrcvc.org](http://www.xrcvc.org). Through constant innovation, we have succeeded in providing support services and creating awareness in the fields of financial access, print access, education access and independent living. The XRCVC's aim is to ensure that vision loss or impairment only remains a physical condition which can be overcome rather than go on to become a disability for the visually challenged.)



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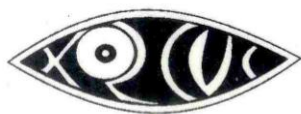
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5. Work continued, and a fully accessible bilingual ATM was showcased at St Xavier's College during in Antarchakshu™ 2011.
6. In June 2012, Union Bank of India became the first bank in the country to launch a fully accessible bilingual ATM, at Ahmedabad (see Annexure E).
7. State Bank of India followed four months later, launching its fully accessible bilingual ATM in October 2012 at New Delhi.
8. On February 27<sup>th</sup> 2013, the IBA issued a circular laying down the standards of what constitutes a truly accessible ATM (see Annexure F). These standards outline what constitutes 'accessibility' features for blind and low-vision users and wheelchair users and process standards that ought to be followed to ensure effective deployment and uniformity amongst accessible ATMs of different banks and therefore facilitating ease at the level of the end consumer. This was on the basis of the work done by a sub-committee on ATM Systems for Visually challenged Persons. The committee was constituted in order to reduce the problems faced by the lack of compliance on the part of banks. It was noticed that many banks were not seriously adhering to the RBI requirement that one-third of new ATMs post-April 2013 should meet the stipulated standards. Many banks were merely sticking Braille labels and passing off the minimal speech available on many machines (such as a 'Welcome' and 'Thank You') as meeting the requirements of "talking ATMS with Braille keypads". Technically, these ATMs may have met the letter of the RBI requirement but fell woefully short of meeting the requirement in spirit. Hence the need for the committee to lay down standards. Given the fact that proven working models were established on the ground, thanks to the pioneering work of Union Bank and SBI, the industry standard was endorsed by the IBA.
9. Other banks to introduce such ATMS are Bank of Baroda, Standard Chartered Bank and Corporation Bank. Today, there are nearly 6000 bilingual fully accessible ATMs across the country offered by Union Bank, SBI, Bank of Baroda, Standard Chartered Bank and Corporation Bank, to name the main players. The USP of bilingual fully accessible ATMs is that a mainstream ATM, with the addition of appropriate software and minimal hardware modification, can move into accessibility mode by the insertion of a headphone jack. The user has the choice of blanking out the monitor on a voice prompt. The person can, with total independence, complete the transaction with the total safety of headphones and the choice of the monitor being switched off. Thus the potential risk of "shoulder-surfing" stands substantially reduced.



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### THE CONCERN

The well-intentioned wording of Clause 3 in RBI's circular dated April 13<sup>th</sup> 2009, (Circular No RBI/2008-09/431 DBOD.No.Leg.BC.123 / 09.07.005 /2008-09) (see Annexure C)) has been diluted by many banks by merely sticking to the letter rather than the spirit of the RBI intent. This has significantly compromised the roll-out of truly accessible ATMs with banks claiming to have met the "Braille labels / talking ATM" requirement, which in reality is indeed problematic. Only a few banks have started rolling out truly accessible ATMs and even among some of these the one-third ratio post-April 2009 has not been met.

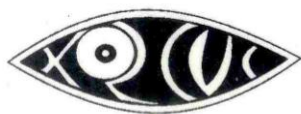
### THE POTENTIAL

As referred in our introductory section, fully accessible bilingual ATMs have the capacity to empower not just blind and low-vision persons but also the vast majority of illiterate and semi-literate people across rural, urban and semi-urban areas of India. Such ATMs have great untapped potential in the area of Direct Cash Transfers to the marginalized section of society. Given the fact that the Government of India would be soon routing subsidies and other wage payments (NREGA) through the banking channels, thus banking a very large unbanked population, there is a major need to build safe, user-friendly, direct interfaces which banking customers can interact with and use. This elimination of a human third party would help build confidentiality and greater security.

India is on the cusp of a major financial inclusion revolution as Post Offices across the country will soon become major deployers of ATMs, especially in rural areas. It is imperative that these ATMs are made fully accessible, so that a vast majority of blind, low-vision, illiterate and semi-literate persons could be included into the financial mainstream.

The benefit of deploying fully accessible bilingual ATMS are as follows:

1. They are easy to learn for all target groups – be they blind, low-vision, illiterate and semi-literate persons.
2. On account of them being the standard ATM with the add-on software, they provide a universal solution and can be thus used by all concerned.
3. Accessibility (active voice guidance) can be triggered simply through the insertion of a standard headphone pin. These headphones are inexpensive and easily available.



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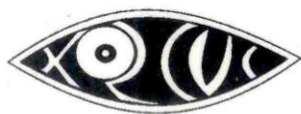
4. The IVRS-based menus follow the standard telephone keypad protocol and allow for upgradation in menu choices.
5. The system currently offers a choice between English and Hindi. This language option can easily be widened to incorporate regional language requirements. This would thus provide local solutions to populations not familiar with either English or Hindi.
6. Unlike some ATM solutions with touch-screens and voice prompts designed for semi-literate / illiterate populations, these ATMs offer wider choice options and allow the user greater choice in cash withdrawals and moreover the option of balance enquiry and PIN change.
7. The optional "screen-off menu" provides greater privacy during banking operations.

### THE ROAD AHEAD—FOLLOW-UP ACTION POINTS

It is strongly proposed and recommended through this representation that the RBI ensure that its path-breaking circular of April 2009 not languish on account of banks' misreading the RBI's intent. We strongly feel that the RBI reinforce the weight of that circular through an additional communication mandating that the said ATMs with Braille labels and talking features should be fully accessible and meet the standards as spelt out by the IBA's circular of February 2013. This benchmarking of truly accessible bilingual ATMs needs to be insisted upon by the RBI.

What is more, given current very low compliance rates with the one-third ratio, the RBI would do well in stock-taking and asking for compliance reports from the banks.

Moreover the XRCVC would be happy to conduct / commission an accessibility audit of deployed ATMs countrywide so that machines which are labeled as accessible can be verified for quality performance.



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### LIST OF ANNEXURES

**Annexure A:** RBI circular RBI/2007-08/358 DBOD.No.Leg BC.91/09.07.005/2007-08 on June 4, 2008

**Annexure B:** Indian Banks' Association procedural guidelines dated November 18, 2008 (vide circular No CE/RB-1/vip/1766)

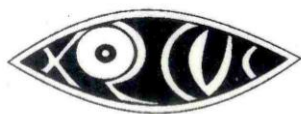
**Annexure C:** RBI circular No RBI/2008-09/431 DBOD.No.Leg.BC.123 / 09.07.005 /2008-09) issued in April 2009

**Annexure D:** Media reports on Accessible ATMs facilitated by XRCVC

**Annexure E:** Union Bank of India launches a fully accessible bilingual ATM, at Ahmedabad in June 2012

**Annexure F:** IBA circular dated February 27<sup>th</sup> 2013 laying down the standards of what constitutes a truly accessible ATM.





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**Annexure A: RBI circular RBI/2007-08/358 DBOD.No.Leg BC.91/09.07.005/2007-08 on June 4, 2008**

RBI / 2007-08 / 358

DBOD.No.Leg BC. 91 /09.07.005/2007-08

June 4, 2008

To

All Scheduled Commercial Banks  
(excluding RRBs)

Dear Sir,

Banking facilities to the visually challenged

1. It has been brought to our notice that visually challenged persons are facing problems in availing banking facilities. It may be noted that banking facilities including cheque book facility / operation of ATM / locker etc. cannot be denied to the visually challenged as they are legally competent to contract.

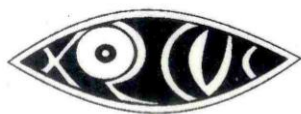
2. It may be recalled that in the Case No. 2791/2003, the Honourable Court of Chief Commissioner for Persons with Disabilities had passed Orders dated 05.09.2005 which was forwarded by IBA to all the member banks vide their circular letter dated October 20, 2005. In the above Order, the Honorable Court has instructed that banks should offer all the banking facilities including cheque book facility, ATM facility and locker facility to the visually challenged and also assist them in withdrawal of cash. Further, in Para 14 of the above Order, the Honorable Court has observed that visually impaired persons cannot be denied the facility of cheque book, locker and ATM on the possibility of risk in operating / using the said facility, as the element of risk is involved in case of other customers as well.

3. Banks are therefore advised to ensure that all the banking facilities such as cheque book facility including third party cheques, ATM facility, Net banking facility, locker facility, retail loans, credit cards etc. are invariably offered to the visually challenged without any discrimination. Banks may also advise their branches to render all possible assistance to the visually challenged for availing the various banking facilities.

Yours faithfully

(Prashant Saran)

Chief General Manager-in-Charge



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Annexure B: Indian Banks' Association procedural guidelines dated November 18, 2008 (vide circular No CE/RB-1/vip/1766)

November 18, 2008

**The Chief Executives of all Member Banks**

Dear Sirs,

Providing Banking Facilities to Visually Impaired Persons

We refer to our circular No.CIR/RB/1230 dated February 4, 2006 enclosing procedural guidelines on the captioned subject. Subsequent to which, we have received several representations from visually impaired persons regarding the facilities and services being provided by banks and the ground level difficulties being faced by them. As you are aware, procedural guidelines were issued in the context of the order dated September 5, 2005 passed by the Court of Chief Commissioner for Persons with Disabilities, New Delhi regarding facilities to be provided to visually impaired persons.

Following complaints from Visually Impaired Persons, the Commissioner for Persons with Disabilities had again issued an advisory to the Finance Ministry and the Reserve Bank of India (RBI) in May 2008 to take necessary steps to ensure that visually impaired persons are not denied normal banking facilities.

Subsequently, the RBI, vide circular DBOD.No.Leg BC.91/09.07.005/2007-08 dated 4th June 2008 advised banks that all banks must render the same services to a visually impaired person as it would to any other person without discrimination. The Circular stated that the banks, must provide the visually impaired with every facility viz., cheque Book facility, ATM facility, net banking facility, locker facility, retail loans, credit cards etc.

Following the above RBI circular, we had examined the need to revise the procedural guidelines issued in February 2006 in consultation with IBA Sub-committee on Customer Service and Customer Rights. We also had interactions with a Mumbai based voluntary organization working for the welfare of Impaired persons. The interactions indicated that technology innovation in the recent years had greatly empowered visually impaired persons in leading a normal life. Technology applications such as screen readers for computers and mobile phones, which are being used by the visually impaired persons for online/net banking, were demonstrated to us. Visually impaired persons can read and understand printed documents etc. by first scanning them and then getting them read out by the screen reader.





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Further, we have seen demonstration of finger print technology being developed by software firm which would enable banks to store thumb impression of visually impaired persons in place of signature in their system. Cheques authenticated by them with thumb impression can be scanned and the image compared with that stored in the system to honor the cheque. It is suggested that when this technology is fully developed and made available in the market, banks should consider integrating it with their core banking platform so that cheque book facility can be extended to a larger segment of visually impaired persons.

Our attention was also drawn to the United Nations Convention on the Rights of Persons with Disabilities, which clearly commits to rights of persons with disability and their access to services. Article 9 of the Convention enables persons with disabilities to live independently and participate fully in all aspects of life and also gives them access to facilities and services open or provided to the public, both in urban and rural areas. Additionally, Article 12 states "Parties shall take all appropriate and effective measures to ensure the equal right of persons with disabilities to own or inherit property, to control their own financial affairs and to have equal access to bank loans, mortgages and other forms of financial credit, and shall ensure that persons with disabilities are not arbitrarily deprived of their property."

It is expected that the guidelines issued by the RBI would result in an increase in the number of ATM cards issued to visually impaired persons. This would enhance the case for installation of talking ATMs to facilitate hassle free operations by visually impaired persons. Banks are requested to consider installing talking ATMs wherever feasible.

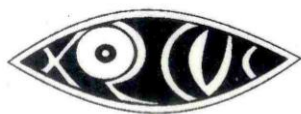
Keeping in view the above, we have revised the procedural guidelines for providing banking facilities to visually impaired persons, copy of which is enclosed. While finalizing the document the Sub-Committee took into consideration that request for ATM facilities, online banking facilities etc., would come only from visually impaired persons who are capable of using the applications. Members are requested to kindly consider the revised procedural guidelines and issue necessary instructions to the operating staff.

Yours faithfully,

**K Unnikrishnan**

**Dy. Chief Executive**

Encl:A/a



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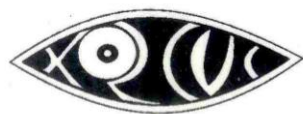
### PROCEDURAL GUIDELINES FOR BANKING FACILITIES TO VISUALLY IMPAIRED PERSONS

#### I. General Instructions

1. Banking facilities for visually impaired persons should be offered at all branches of the bank.
2. Banks should not equate visually impaired customers with illiterate customers.
3. All Banks must provide the same facilities to a visually impaired customer/prospective customer as it would to any other customer. But at the same time the customers should be made aware of the risk involved in some of these facilities which may be higher than that for a normal customer.
4. Additional facilities like reading and filling up of forms, slips, cheques should be provided to a visually impaired customer, if required.
5. Banks should not deny any services to visually impaired customers including visually impaired customers who use their thumb impression for operating the bank account.
6. A visually impaired customer must not be forced to operate the bank account jointly with any person or in the presence of any person.
7. Visually impaired customers may be allowed to appoint a person/persons as their Power of Attorney or Mandate Holder to operate their bank account if the visually impaired customer so desires.

#### II. Opening of Bank Accounts

1. All banking products offered by the bank should be made available to visually impaired persons.
2. The bank must follow the same procedure for opening the account of a visually impaired person as it does for its other customers.
3. He / She must be allowed to open the account either singly or jointly with others.



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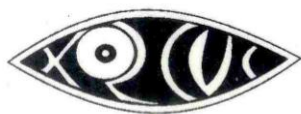
4. The Bank must allow the visually impaired customer to open a joint account with anybody that he/she chooses including person(s) who is/are visually impaired.
5. The Officer / Manager of the branch should read out the rules of business and other terms and conditions in the presence of a witness, if required by the customer.
6. The bank branch manager must inform a visually impaired customer/prospective customer of his rights and liabilities before opening the account.
7. The documentation requirements of a visually impaired customer must be the same as any other customer.
8. The account has to be clearly marked as "the account holder is visually impaired".

### **III. Withdrawal of cash / Cheque book facility**

1. Facilities for withdrawal of cash as are provided to all customers regarding cash payments must be provided to visually impaired customers.
2. In case a visually impaired customer makes cash withdrawals at the bank then the payment must be made in the presence of another bank employee/officer. No outside witnesses are required unless the visually impaired customer requests that such witnesses be present.
3. Operations should not be restricted to self-withdrawals.
4. Cheque book facility should not be denied to visually impaired person.
5. All procedures pertaining to the use of such cheque books by visually impaired customers must be in accordance with that the other customers.
6. Cheques issued by visually impaired persons to third parties should be honoured, if otherwise in order.

### **IV. Credit Cards /Debit Cards**

1. Visually impaired customers must be issued credit cards/debit cards on request.



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2. All rules and regulation regarding credit/debit card must be available on the web-site of the respective bank in accessible format. These should be read out to visually impaired persons and perceived risk factors explained to them.
3. Banks may consider issuing Credit/Debit Card with Photograph. This Photograph will work as a identification/verification.

### **V. ATM/Debit Cards**

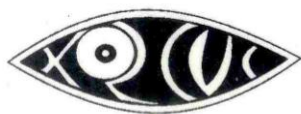
1. Visually impaired customers must be permitted to avail of ATM facilities.
2. Banks should also ensure that the ATMs are accessible to other categories of persons with disabilities such as the orthopedically disabled.

### **VI. On Line Banking / Mobile Banking and Tele Banking/Phone Banking**

1. All banks must have Accessible websites and conform to international accessibility standards.
2. All customer facing applications such as web applications, desktop applications and mobile applications should be accessible to visually impaired persons.
3. The banks should have alternate methods of user authentication/password verification.
4. All features especially those related to customer security must be accessible visually impaired persons.

### **VII. Lockers**

1. Visually impaired customers should be provided with locker facility on request.
2. Suitable lockers conveniently located for operations may be allotted.
3. Bank procedures for issuing a locker to a visually impaired customer must be the same as to any other customer.
4. A visually impaired customer may be given the following options for operation of locker:
  - a. Operation – Singly



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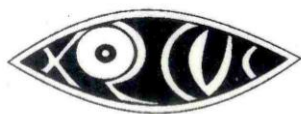
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- b. Operation - Singly with the assistance of a reliable person, as per the choice of the Applicant.
  - c. Operation - Jointly.
5. A visually impaired customer may request the person in-charge of the locker to be present when the locker is opened or to check if nothing has been left behind or fallen after the locker is closed.

### **VIII. Loans**

- 1. Loans must be made available to visually impaired customers as are offered to other customers and their impairment of vision should not be a criterion for sanctioning/denying a loan.
- 2. No additional burden of interest payment, collateral and other terms should be imposed on the visually impaired customer.





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Annexure C: RBI circular No RBI/2008-09/431 DBOD.No.Leg.BC.123 / 09.07.005 /2008-09) issued in April 2009

### RESERVE BANK OF INDIA

[www.rbi.org.in](http://www.rbi.org.in)

RBI/2008-09/431

DBOD.No.Leg.BC.123 /09.07.005/2008-09 April 13, 2009

All Scheduled Commercial Banks

(Excluding RRBs)

Dear Sir,

#### **Need for Bank Branches / ATMs to be made accessible to persons with disabilities**

1. We have been receiving several suggestions including from Government of India to make bank branches and ATMs easily accessible to persons with disability by providing ramps so that wheel chair users can access them and the height of the machine is also appropriate for them. Further we have also been receiving suggestions for installing speaking software and key pads with letters in Braille to facilitate use by persons with visual impairment.

2. We have examined the above suggestions and banks are advised to take necessary steps **to provide all existing ATMs / future ATMs with ramps** so that wheel chair users / persons with disabilities can easily access them and also make arrangements in such a way that the height of the ATM does not create an impediment in its use by a wheelchair user. **Banks may also take appropriate steps including providing ramps at the entrance of the bank branches** so that the persons with disabilities / wheel chair users can enter the bank branches and conduct business without much difficulty.

3. Further, banks should **make at least one third of new ATMs installed as talking ATMs with Braille keypads and place them strategically in consultation with other banks to ensure that at least one talking ATM with Braille keypad is generally available in each locality** for catering to needs of visually impaired persons. Banks may also bring the locations of such talking ATMs to the notice of their visually impaired customers.

Yours faithfully

(Prashant Saran)

Chief General Manager-in-Charge

FAX NO.22705691

TELEPHONE No. 22661602

**DEPARTMENT OF BANKING OPERATIONS & DEVELOPMENT, CENTRAL OFFICE, 12th Floor, Central Office Building, Shahid Bhagat Singh Marg, Mumbai-400 001 E-mail: [cgmicdbodco@rbi.org.in](mailto:cgmicdbodco@rbi.org.in)**



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### Annexure D: Media reports on Accessible ATMs facilitated by XRCVC

#### Report 1...Financial Chronicle

<http://www.mydigitalfc.com/banking/braille-enabled-atms-visually-challenged-finally-here-517>

Braille-enabled ATMs for the visually challenged finally here

Aug 12 2009 21:58 hrs IST, Mumbai

By Sneha Shah

The Reserve Bank of India's (RBI) directive to banks asking one third of their automated teller machines (ATMs) to be enabled with systems for people with various disabilities has set the ATM manufacturers on task.

NCR Corporation and Diebold Systems, two ATM manufacturers, have unveiled their machines designed for the visually challenged in Mumbai on Wednesday.

The machine that is voice-aided and has Braille keyboard — which can be read by the visually challenged — was unveiled after the two companies worked with the Xavier's Resource Centre for Visually Challenged (XRCVC) on the special requirements and difficulties of the visually challenged people. Early this year, RBI had asked the banks to ensure that one-third of their offsite ATMs be enabled with systems that can help people with visual or other orthopedic disabilities in its quest for financial inclusion.

According to an official from NCR, not many people with disabilities have an ATM card and are savvy enough to use ATMs and, hence, a voice-aided Braille would prove useful. When asked, XRCVC director Sam Tarporevala said he himself does not have an ATM card and having such a machine would motivate him to have one. Of the existing 40,000 ATMs operational now, only 2 per cent are voice-aided. "The existing ATM machines can be upgraded to the needs of visually challenged and the voice aided systems are inbuilt and need to be just enabled in every existing machines," said Anurag Nigam, director-managed services, Diebold Systems.

The cost of the normal ATM machines are anywhere between Rs 4 lakh to Rs 6 lakh and making up-gradation will cost around Rs 50,000.



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### Report 2...Hindu Businessline

#### Talking ATMs for the visually challenged!

Priya Sheth and Deepa Nair

"This is the first time that I have seen the world through the eyes of a visually challenged person and it's an experience that I will never forget," said a participant at Antarchakshu, an event organised by the Xavier's Resource Centre for the Visually Challenged (XRCVC).

From buying groceries, playing foot ball and even withdrawing money from an ATM, participants were blindfolded and put through a maze of daily chores by the Xavier's volunteers, to sensitise people on a day in the life of a visually-challenged person. In fact, the highlight of the event was the talking ATM for the visually-challenged which was displayed at the college. "There are partially talking ATMs which have been deployed in many banks, but they are useless for us as they say the bare minimums like – welcome and thank you," said Sam Taraporevala, Director of XRCVC who is also visually challenged.

The Reserve Bank of India had stated in its circulars (2008, 2009) that "Banks should make at least one third of the new ATMs installed as talking ATMs with Braille keypads and place them strategically in consultation with other banks to ensure that at least one talking ATM with Braille keypad is generally available in each locality for catering to the needs of visually impaired persons."

"The visually challenged need an ATM that can guide them properly. We have developed a software which will ensure that the visually impaired can operate the machine themselves keeping in mind safety of the transaction," said Nagesh M Nayak, Partner – professional services, NCR. The company has been developing these specialised machines for different banks. Many of them have deployed these machines on a pilot basis. Each ATM has headphones attached to it so that the visually challenged can hear the instructions and fill in the required data. "The labels on the ATMs are written in Braille. There is also an option to blank out the screen as a safety mechanism to ensure that no bystander misuses the pin," said Nayak.

Apart from the machine displayed by NCR, there was also another talking ATM with similar features displayed by Diebold. "We only provide the machine, the voice clips are added by the bank which the ATM is supplied to," said Rakesh Suryavanshi from Diebold.

Although the ATM manufacturers were tight lipped about the banks they were supplying their machines to, they were hopeful that they would be deployed by the banks soon and visually-challenged customers would truly benefit.

<http://www.thehindubusinessline.com/industry-and-economy/banking/article2442363.ece>



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### Annexure E: Union Bank of India launches a fully accessible bilingual ATM, at Ahmedabad in June 2012

New ATMs for differently-abled will make transactions easier

Mugdha Variyar, Hindustan Times

Mumbai, July 07, 2012

Tilak Joshi, 21, a student of St Xavier's College in Dhobi Talao was unable to use an automatic teller machine (ATM) without assistance until now. But from Saturday, vision-impaired people such as Joshi will be able to withdraw cash from an ATM on their own. The Union Bank of India (UBI) will launch a fully accessible, speech-enabled, bilingual ATM in Thane's Passport office on Saturday for differently-abled people. It will be the first such ATM in the city.

"UBI is the first bank in the country to deploy fully-accessible ATMs to help the differently-abled make transactions independently," said Lalit Sinha, general manager, UBI.

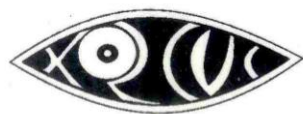
By September, 50 machines will be installed in passport offices across the country.

The facility will also have a ramp for wheelchair-bound persons, a guide path on the floor to direct the vision-impaired towards the machine, Braille guide labels on the machine, and complete step-wise voice guidance through headphones. Users can opt for voice guidance in English or Hindi.

In 2008-09, the Reserve Bank of India (RBI) had issued guidelines to all banks to make at least one-third of all new ATMs accessible to the vision-impaired through voice guidance and Braille keypads.

"The inclusion of guidance in Hindi will also facilitate financial inclusion for the country's semi-literate and illiterate population," said Dr Sam Taraporevala, director, Xavier's Resource Centre for the Visually Challenged, which tested the machines.

<http://www.hindustantimes.com/India-news/Mumbai/New-ATMs-for-differently-abled-will-make-transactions-easier/Article1-884569.aspx>



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Annexure F: IBA circular dated February 27<sup>th</sup> 2013 laying down the standards of what constitutes a truly accessible ATM

### STANDARDS FOR ACCESSIBLE ATM



Adopted by

**INDIAN BANKS' ASSOCIATION**





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The RBI circular - RBI/2008-09/431 DBOD.No.Leg.BC.123/09.07.005/2008-09 dated 13<sup>th</sup> April 2009 mandates that all new and existing ATMs have accessibility features for wheelchair users. It also mandates that 1/3<sup>rd</sup> of all new ATMs ensure accessibility features for blind and low vision users. Based on the ground work since the issuance of the said circular by various Banks as also the R & D work undertaken by the Xavier's Resource Centre for the Visually Challenged (XRCVC) in partnership with various ATM Manufacturers and Banks, it has been felt appropriate to have a standards document highlighting the specific features that constitute an Accessible ATM.

These standards outline what constitutes 'accessibility' features for blind and low vision users and wheelchair users and process standards that ought to be followed to ensure effective deployment and uniformity amongst accessible ATMs of different banks and therefore facilitating ease at the level of the end consumer. There is a necessity to standardize the talking ATM process across the industry both between banks and ATM manufacturers.





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### FEATURES TO BE COMPLIED WITH FOR ACCESSIBLE ATMs

The fundamental principle of an Accessible ATM for development, testing and implementation purposes is to ensure a machine which enable the user to complete all transactions successfully with a blank screen simply through voice guidance for totally blind users, permit independent use through clear screen data for low vision / partially sighted users and effective physical access for wheel chair users. The Features below are listed as per different user profiles.

#### Totally Blind Users

**TRANSACTION FEATURES:** (The Features are listed as per the sequence they should appear in the ATM transaction flow.)

1. **Audio Start-up Option:** The audio activation to be provided through insertion of the headphone in the ATM headphone jack.
2. **Welcome Message and Language Option:** The audio start-up should begin with a welcome address for the user with a menu choice of languages (one of the following: English, Hindi / Regional). This choice should be activated by number pad keys 1, 2 or 3.
3. **Volume Control Option:** A volume control capability on the unit to be provided with and the same needs to be provided as an audio prompt. Number pad keys 1 and 2 to be given as options to increase or decrease the volume. Since at this time the help functionality is yet not given, use of any function key other than the number pad keys need to be given a complete orientation of in reference to the number pad.
4. **Hide / Blank out Screen:** The transaction session needs to begin with the option to hide / blank out the visual display. This choice should be activated / deactivated by pressing a pre-announced number pad key. This feature allows for additional security for the user. Based on the option chosen the machine needs to announce whether the screen is hidden or is still visible.





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5. **Help / Orientation Functionality:** A complete voice guided orientation option to the machine or skip to transaction directly to be given. The orientation needs to give a full layout of the ATM Machine, the function keys - their number, their position, the number pad - the number of keys on the number pad including the symbol keys, card slots, money outlets and the position of the receipt printer. The option of listening to the orientation or jumping directly to transaction should be activated by pressing a pre-announced key on the number pad. The orientation text should be simple to understand.

***Example of audio orientation message:** There is a screen in front of you. The keypad is below your screen, you will be using keypad throughout your ATM operations, to select various options and to enter data. This keypad is a standard telephone keypad, along with four additional keys to its right. CLEAR key is right of number 3, having a raised vertical symbol. CANCEL key is right of number 6 having a raised cross symbol. ENTER key is right of number 9, having a raised circle symbol. The cash dispenser slot is below the keypad, on the front face of ATM, the receipt printer slot is at the bottom left of the screen on the front face of the ATM. The card insertion slot is on the bottom right of the screen on the front face of the ATM. In addition, Braille labels are put in to find positions of, Receipt, Cash, and Card slot. Please pull out your headphone pin, once you complete your ATM operation. To repeat orientation message - Press, 1, or to continue your transaction, Press 2.*

6. **Transaction Menus and Processes:** There has to be complete voice guided assistance for all the ATM Functions. The specific features that need to be kept in mind are:
- Every single screen display needs to be completely voiced. E.g. menus, error messages, prompts etc. The only not spoken audio output would be the PIN which needs to beep or voiced out as \* (star) for each entry.
  - Repeat: A repeat functionality would help the user verify the correctness of choices and entries before Enter / OK. Messages should be repeated automatically. At appropriate places voice guidance is paused when a blind user is entering data e.g. PIN entry or amount entry, etc.
  - IVR Type Operation: All operation to be performed through Keypad only. Interactive Voice Response type. FDK functionality is disabled during talking mode. The said is simpler, easier and more accessible. All transactions can be conducted through using number keys 1 and 2 and so on in a menu-submenu format.
  - A touch screen ATM always requires to be accompanied by a regular keypad system.
  - Whilst entering amount / account number or feeding any other data (except PIN) on the screen the keypad numbers should be self voicing.
  - In the case of value added services such as bill and other payments, similar accessibility standards as described in these guidelines need to be followed.



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- The transaction commands need to be clear and specific in informing which key needs to be pressed for the function to be performed and where the key will be found. The flow of orientation to keys needs to be standardized for the entire module.
- In transactions of collecting cash, inserting card and collecting the receipt, the user in the transaction commands needs to be voice prompted with regards to the position of the card slots, the money outlets and the position of the receipt printer.
- Error Messages: The error messages need to be voice indicated. An inverted card should result in an audio prompt that the card is put in wrongly.
- Complete screen text synchronization with voice output.

**Complete Example of Work Flow for all the Transaction is attached in Annexure A.**

### Additional Features

1. **Headphones:** The Headphone jack should use the universal standard pin size.
2. **Braille Labels:**
  - The card slot, the cash dispenser, the receipt printer and headphone jack slots to be aided with Braille labels.
  - An additional Braille label stating 'This is a talking ATM' also needs to be placed on top of the screen.
  - Braille labels to be created using Contracted Braille.
  - All Braille labels to be placed as close to the specific item as possible. As far as possible a gap not exceeding 1 inch (25 mm) should be maintained.
3. In case a user does not press any button for 10 seconds, the system should automatically **repeat the prompts**.
4. The **time out** for ATM machines is recommended to be 30 seconds as this allows for enough time for a visually challenged person to complete the transactions.
5. **Use of Text-To-Speech (TTS) technology.** Use of pleasant TTS voices preferably Indian accent with lexicon adjustments if words are not announced correctly by TTS engine.
6. There needs to be **tactile / textured floor guidance** from the entrance of the ATM kiosk to the machine which is accessible. This will ensure that visually challenged person can independently locate the accessible machine from all that exist within the kiosk.
7. **Feature of skipability for Quick ATM operation:** The Customer inserts headphone pin into the ATM audio jack to enable Talking mode and Inserts his / her ATM card: By default English language is selected and Screens are hidden.







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The suggested work flow in case of quick ATM operation for a blind user is as follows:

→ Inserts his / her ATM card.

By default language selected is **English** and Screens are **hidden** (as explained above).

→ Please enter your PIN message.

→ After entering PIN

ATM gives transactions options.

- Cash Withdrawal.
- Balance Enquiry.
- PIN Change.



8. Language Support: **Multilingual** support. To start with two languages offered, English and Hindi both.
9. ATM Usage for both **Sighted** and **Disabled**.
10. **No Special** ATM Card.
11. **Own bank** as well as **other banks** ATM card usage possible.
12. **Accessible Manual**: It is recommended that the Banks make available a manual in accessible formats (accessible formats for blind persons are **Braille**, **DAISY** digital talking book, **accessible pdf**, **e-text**, **html**, **large font book**, etc.) on features and functionalities of accessible ATMs so as to give a complete orientation to the user.
13. Also it is **recommended** that after starting with **three key ATM operations** (Cash Withdrawal, Balance Inquiry and PIN Change) banks should aim **to make available all ATM functions** in accessible talking mode in a **phase wise manner**.

### Low Vision / Partially Sighted Users

1. **Colour Contrast**: Good contrast (dark and light) for text and background - on the monitor as also on the function keys. (Bright colours against dark backgrounds. E.g. White on Black or Yellow on Blue).





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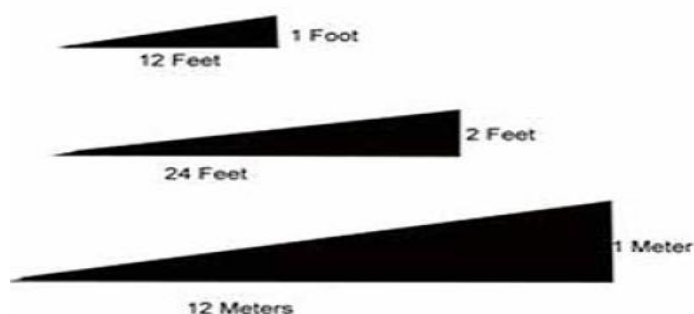
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2. **Font Style:** Non Serif fonts.
3. **Font Size:** Large: Characters should be 3/16 inch high minimum based on the uppercase letter "I".
4. **Synchronisation of text and voice.**
5. **Bold and big numbers /** names on the keys for easy reading.

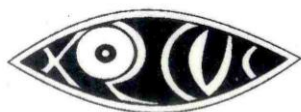
### Wheelchair Users

1. **Entry Point:**
  - Ground level surface.
  - No threshold.
  - If the Surface is at a height then a ramp needs to be provided.
2. **Ramp:**
  - Slope: A ramp with gradient of 1:12 maximum. For every inch (25 mm) above the ground that the ramp rises, provide 12 inches (305 mm) of ramp length.

Examples of 1:12 Ramps



- Width: The width should be minimum of 1200 mm (48 inches).
- Landing Space: There should be landing at every 750 mm (30 inches) of a vertical rise. The size of the landing space needs to be a minimum of 1500 mm x 1500 mm (60 x 60 inches) of clear space. There should also be a clear landing space at the top and bottom of the ramp.
- Hand rails: Ideally hand rails on both sides of the ramp. Hand rails at two levels 760 mm (30 inches) and 900 mm (36 inches). Both ends to be rounded or grouted and extend 300 mm (12 inches) beyond top and bottom of the ramp.
- Surface of the ramp and landings needs to be slip resistant.



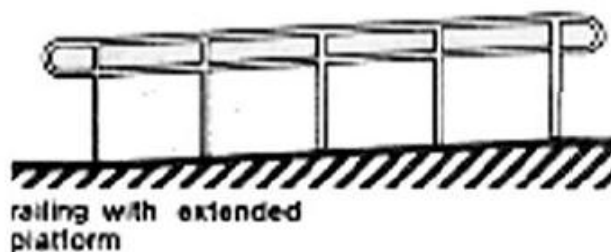
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### 3. Door:

- Clear Door Opening: If the ATM kiosk has a door it should provide a clear opening of 900 mm (36 inches).
- Handles: Need to be placed between 800 mm (32 inches) and 1000 mm (40 inches) from floor level.
- Type and Hinges: Handles should be of lever type and hinges to be smooth to be operable with force not more than 20 Newton.
- Landing Space: For all doors opening inside or outside or sliding type, a landing space of 1500 mm x 1500 mm (60 x 60 inches) after the ramp is a must, to allow wheelchair user to open the door. The landing needs to be slip resistant.

### 4. Cubicle size:

- Diameter Space: In order to facilitate a 180 degree maneuver of the wheelchair a 60 inch (1524 mm) diameter space or a 60 inch (1524 mm) by 60 inch (1524 mm) T-shape space should be available.
- Clear Floor Size: Minimum clear floor size of the cubicle needs to be 1800 mm (72 inch) by 1800 mm (72 inch). (i.e. beside the ATM machine).

### 5. Height and Depth of Machine:

- Maximum height: Of any object expected to be reached by the wheelchair user, either the touch screen, num pad or any other shelf in the ATM cubicle has to be placed in the range of 800 mm - 1000 mm (32 inch - 40 inch).



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- Depth: If there is a table / shelf provided, there should be leg and knee space for the wheelchair with a minimum clear knee space of 700 mm (28 inch) high and 280 mm - 300 mm (11 inch - 12 inch) deep.

### SPECIAL NOTE

In actual ATM transactions there can be many scenarios. For each screen - text should be voiced out properly in both English and Hindi.

There is a need to spend time on testing and getting feedback from blind, low vision and wheelchair users to fine tune the accessibility features. This is a must especially for the first talking ATM model.

The actual work flow between banks, ATM manufactures and different models may vary. There is however a need to standardize the flow and talking ATM operations as much as possible as per the suggested guidelines. This is mainly from blind users' perspective and it will be good for the banks and ATMs manufacturers to have one solution for all.



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### ANNEXURE A

**Complete example of the workflow and screen shots for an Accessible ATM as adopted by Accessible ATMs**

**(This flow is complete, comprehensive and extremely user friendly.)**

**There will be two parts in the work flow.**

**First part** is prior to insertion of ATM card and entering PIN (before connecting to bank's switch. In an **offline** mode)

**Second part** is after insertion of ATM card and entering PIN (i.e. after connected to bank's switch. In an **online** mode)

**Work flow for the First part - Offline mode.**

1. Customer plugs in the headphone into the ATM audio jack - talking mode is enabled.
2. Welcome audio message.
3. Languages choice.
4. Volume control adjustment through keypad (EPP).
5. Hide or display option for ATM screens.
6. Listen to orientation message or skip.
7. Repeat orientation message or continue.
8. Insert ATM card.

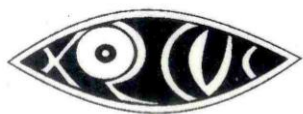
**Work flow for the Second part - Online mode.**

1. Enter your PIN.
2. ATM transactions
  - Cash Withdrawal
  - Balance Enquiry
  - PIN Change
3. For Cash Withdrawal press X.

For Balance Enquiry press X.

For PIN Change press X.

(Here used X as keypad numbers mapping will depend on bank's FDK options.)



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### TRANSACTION FLOW FOR VARIOUS TRANSACTIONS

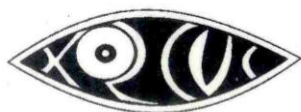
#### I. CASH WITHDRAWAL

- You have selected Cash Withdrawal.  
Press  
1 - To Confirm  
2 - To go back
- Please select your account.  
Press  
1 - Savings account  
2 - Current account
- Please enter the amount and press enter (amount entered should be announced in full not just single digits. E.g. one, ten, hundred, thousand, ten thousand, etc.).
- You have entered Rupees XXXX /-  
Press  
1 - To Confirm / if correct  
2 - To go back / if incorrect
- If you want receipt  
Press  
1 - If Yes  
2 - If No
- Please wait; we are processing your request.
- Please collect your cash & receipt, if you have asked for receipt.
- Thank you for using XXX bank ATM.

#### II. BALANCE ENQUIRY

- You have selected Balance Enquiry.





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Press

1 - To Confirm

2 - To go back

- Please select your account.

Press

1 - Savings account

2 - Current account

- If you want receipt

Press

1 - If Yes

2 - If No

- Please wait; we are processing your request.
- Balance in your Account is Rs XXXX /- .
- Please collect your receipt, if you have asked for it.
- Thank you for using XXX bank ATM.

### III. PIN change

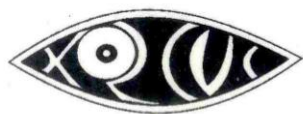
- You have selected PIN Change.

Press

1 - To Confirm

2 - To go back

- Please enter your new PIN.
- Please Re-enter your new PIN (While entering the PIN the audio prompt of a beep or \*(star) needs to be spoken).
- Please wait; we are processing your request.



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\* [info@xrcvc.org](mailto:info@xrcvc.org) \* <http://www.xrcvc.org>

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- Your PIN has been changed successfully.
- Thank you for using XXX bank ATM.





## Xavier's Resource Centre for the Visually Challenged

St. Xavier's College, 5 Mahapalika Marg, Mumbai - 400001

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XYZ BANK'S WORK FLOW FOR A TALKING ATM IS AS GIVEN BELOW IN A TABLE FORMAT WITH BOTH AUDIO AND SCREEN TEXT. SAME CAN BE STANDARDIZED.

<u>Audio Spoken</u>		<u>Screen Text</u>	
As soon as headphone is plugged into the jack, voice guidance (talking mode) will start.		First screen is XYZ Bank's standard ATM screen. Screen keeps changing with latest products info and "Please insert your card" message. XYZ Bank has bilingual Hindi and English text for "Please insert your card" as screen text.	
English audio	Hindi audio	English screen text	Hindi screen text
Welcome to the XYZ Bank accessible ATM	XYZ बैंक के एक्सेसिबल एटीएम में आपका स्वागत है.	XYZ Bank's branded screens text displayed as below.  WELCOME TO XYZ Bank's ATM  PLEASE INSERT YOUR CARD	XYZ Bank's branded screens text displayed as below.  XYZ Bank's ATM MEIN AAPKA SWAGAT HAI  KRIPAYA APNA CARD PRAVISTHA KARE
Please select a language of your choice. Select 1 for English, 2 for Hindi	अपनी पसन्द की भाषा का चयन करें, इंग्लिश के लिये एक दबायें, हिन्दी के लिये दो दबायें.	SELECT YOUR LANGUAGE - ENGLISH - HINDI	APANI PASAND KI BHASHA KA CHUNAV KARE - ENGLISH - HINDI
Volume control Press 1 to increase volume, press 2 to decrease volume Press enter to proceed Enter key is right of number 9  (Beeps to know volume increase / decrease)	ध्वनि नियंत्रण. आवाज बढ़ाने के लिए एक दबाएं. आवाज कम करने के लिए दो दबाएं. आगे बढ़ने के लिए एन्टर दबाएं. एन्टर बटन संख्या 9 की दाहिनी ओर है.	PRESS "1" TO INCREASE THE VOLUME  PRESS "2" TO DECREASE THE VOLUME  PRESS ENTER TO PROCEED.	AAWAJ BADHANE KE LIYE "1" DABANYE  AAWAJ KAM KARNE KE LIYE "2" DABANYE  AAGE JANE KE LIYE "ENTER" DABANYE

<p>The audio session allows you to hide and display ATM screens for privacy during a banking session</p> <p>To hide the ATM screens please press 1 To display the ATM screens please press 2</p>	<p>यह ऑडियो सत्र, आपके बैंकिंग सत्र, के दौरान, आपकी गोपनीयता के लिए आपको एटीएम स्क्रीन छुपाने या दिखाने की सुविधा देता है.</p> <p>एटीएम स्क्रीन छुपाने के लिए, कृपया एक दबाएं एटीएम स्क्रीन दिखाने के लिए, दो दबाएं.</p>	<p>PRESS "1" TO HIDE THE SCREENS</p> <p>PRESS "2" TO DISPLAY THE SCREENS</p>	<p>SCREEN CCHIPANE KE LIYE "1" DABANYE</p> <p>SCREEN DIKHANE KE LIYE "2" DABANYE</p>
Your ATM screens are hidden.	आपकी एटीएम स्क्रीन्स प्रदर्शित नहीं की जा रही हैं.		
Your ATM screens are displayed	आपकी एटीएम स्क्रीन्स प्रदर्शित की जा रही हैं.		
<p>The audio session allows you to hear a short-ATM-orientation before starting your transaction,</p> <p>To skip the orientation, please press 1, To hear the orientation, please press 2.</p>	<p>ये ऑडियो सत्र, लेनदेन शुरू करने से पहले, एटीएम इस्तेमाल करने सम्बन्धी संक्षिप्त जानकारी, सुनने की सुविधा प्रदान करता है. यदि आप एटीएम इस्तेमाल करने सम्बन्धी जानकारी नहीं सुनना चाहते, तो कृपया एक दबायें, यदि आप एटीएम इस्तेमाल करने सम्बन्धी जानकारी सुनना चाहते हैं, तो दो दबायें.</p>	<p>PRESS "1" TO SKIP THE ATM ORIENTATION</p> <p>PRESS "2" TO HEAR ATM ORIENTATION</p>	<p>ATM NIRDESHON KO BAND KARNE KE LIYE "1" DABANYE</p> <p>ATM NIRDESHON KO SUNANE KE LIYE "2" DABANYE</p>
Orientation of the ATM audio - the orientation message will as per ATM model. An example for the same is provided in the guidelines section.			
You have chosen, to, listen to the orientation	आपने एटीएम इस्तेमाल करने सम्बन्धी संक्षिप्त जानकारी, सुनने का, विकल्प चुना है.		
You have chosen, not to, listen to the orientation.	आपने एटीएम इस्तेमाल करने सम्बन्धी संक्षिप्त जानकारी, नहीं सुनने का, विकल्प चुना है.		
To repeat orientation message press 1 or	संक्षिप्त जानकारी फिरसे सुनने के लिए 1 दबाएं. आगे बढ़ने	PRESS "1" TO REPEAT ATM ORIENTATION	ATM NIRDESHON KO DOBARA SURANE KE LIYE "1" DABANYE

to continue your transaction press 2.	के लिये २ दबाएं.	PRESS "2" TO CONTINUE	JARI RAKHANE KE LIYE "2" DABANYE
Please Insert Your ATM card. Card slot is at the right hand side.	कृपया अपना, एटीएम कार्ड डालें. कार्ड खांचा आपके दाहिनी ओर है.	XYZ Bank's branded screen displaying bilingual text  PLEASE INSERT YOUR CARD  KRIPAYA APNA CARD PRAVISTHA KARE	
Please enter your ATM PIN and press enter to continue, if you make any mistake just press clear, The clear key is to the right of number 3.	कृपया अपना एटीएम पिन दर्ज करें. लेनदेन की प्रक्रिया जारी रखने के लिये, एन्टर दबाएँ. पिन दर्ज करते समय कोई गलती होने पर, क्लियर दबाएँ और पिन फिर से दर्ज करें, क्लियर बटन, संख्या तीन के दाहिनी ओर है.	XYZ Bank's branded screen  PLEASE ENTER YOUR PIN	
For Cash Withdrawal press X For Balance Enquiry press X For PIN change press X	न्नकद राशि के लिए, X दबाएं, खाते का बैलेंस जानने के लिए, X दबाएं, पिन नम्बर में बदलाव करने के लिये, X दबायें.	XYZ Bank's branded screen  PLEASE SELECT YOUR TRANSACTION	

(Here used X as keypad numbers mapping will depend on bank's FDK options.)

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