No.CIR/RB/ATMVCP/**6846** February 27, 2013

#### The Chief Executives of all Member Banks

Dear Sirs/Madam,

#### ATMs installed for Visually Challenged Persons

We refer to the RBI circular vide DBOD.No.Leg.BC.123 /09.07.005/2008-09 dated 13<sup>th</sup> April 2009 which mandates that all new and existing ATMs have accessibility features for wheel chair users. It also mandates that 1/3<sup>rd</sup> of all new ATMs ensure accessibility features for blind and low vision users. There has also been a follow up RBI circular vide DBOD.No.Leg.BC.38 /09.07.005/2012-13 dated 5<sup>th</sup> September 2012 reiterating the same.

Following the RBI circulars the IBA had constituted a Sub-Committee on ATM systems for Visually Challenged Persons. The Subcommittee was set up to iron out initial problems resulting in the field because of ineffective models as well as lack of standardization. It was also aimed to collectively work at ensuring that cross country deployment of accessible ATMs effective and possible. The Sub-Committee through its deliberations and interactions with ATM manufacturers over the past years has been able to address the key concerns and take forward the initiative of effective deployment of accessible ATMs across the country.

It is worth mentioning that the successful working of the Sub-committee in collaboration with the Xavier's Resource Centre for the Visually Challenged (XRCVC) and pioneering initiatives taken by Union Bank of India and State Bank of India has made bi-lingual accessible ATMs a reality in India with over 2000 such machines deployed across the country. These were required in order to avoid partially speaking ATMs which may have a few voice prompts but do not meet the criteria of accessibility as also avoid duplication of efforts by learning from already successful models.

Keeping in view of the above, the present document on Standards for Accessible ATMs aims to lay down industry criteria which may be adopted by all banks to ensure effective deployment and uniformity among accessible ATM machines of different banks and therefore facilitate ease at the level of the end consumer.

At the Meeting of the above Sub-Committee held on 24<sup>th</sup> August 2012, a Report was submitted by the Working Group consisting members from State Bank of India, ICICI Bank and HDFC Bank constituted by the Sub-Committee. The Report suggested a Process Flow for cash withdrawal by a visually challenged person at an ATM. The Report was submitted to the Standing Committee at its meeting on 19<sup>th</sup> November 2012. The Committee deliberated on the issue in detail and decided to circulate (1) The Standards for Accessible ATMs prepared by Union Bank of India and XRCVC and (2), The Suggested Process Flows and Additional Features among the member banks. The decision of the Standing Committee was ratified by the Managing Committee of the Association at its meeting held on 30<sup>th</sup> November 2012. A copy of the Standards for Accessible ATMs (Annexure –I) and the Process Flow for cash withdrawal by a visually challenged person at an ATM (Annexure –II) are enclosed for upgrading the ATM Standards.

Member banks are requested to kindly consider adopting the Standards for Accessible ATMs and the Process Flow for cash withdrawal by a visually challenged person at an ATM, within your deployment process.

Yours faithfully,

K Unnikrishnan Deputy Chief Executive

Encl: as above

ANNEXURE - I

# **STANDARDS FOR ACCESSIBLE ATM**



Adopted by

# **INDIAN BANKS' ASSOCIATION**

The RBI circular - RBI/2008-09/431DBOD.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.



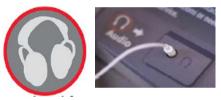
# FEATURES TO BE COMPLIED WITH FOR ACCESSIBLE ATMs

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.



- 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.
- 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 cross symbol. ENTER key is selow 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.
  - Whist 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.
  - 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.
  - $\circ\,$  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.



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

 $\rightarrow$ Inserts his / her ATM card.

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

- $\rightarrow$  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).
- 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.

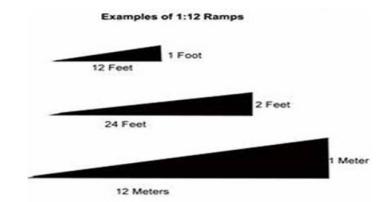
### Wheelchair Users

#### 1. Entry Point:

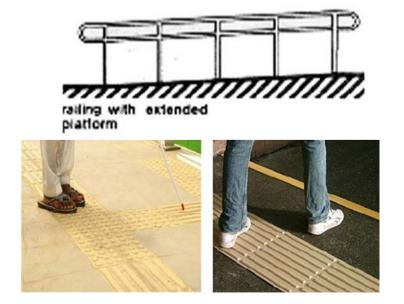
- Ground level surface.
- No threshold.
- o If the Surface is at a height then a ramp needs to be provided.

#### 2. Ramp:

<u>Slope:</u> 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.



- <u>Width:</u> The width should be minimum of 1200 mm (48 inches).
- <u>Landing Space</u>: 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.
- <u>Hand rails:</u> 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 300mm (12 inches) beyond top and bottom of the ramp.
- <u>Surface of the ramp and landings needs to be slip resistant.</u>



- 3. Door:
  - <u>Clear Door Opening:</u> If the ATM kiosk has a door it should provide a clear opening of 900mm (36 inches).
  - <u>Handles:</u> Need to be places between 800mm (32 inches) and 1000mm (40 inches) from floor level.
  - <u>Type and Hinges:</u> Handles should be of lever type and hinges to be smooth to be operable with force not more than 20Newton.
  - <u>Landing Space</u>: For all doors opening inside or outside or sliding type, a landing space of 1500mm x 1500mm (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:

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

#### 5. Height and Depth of Machine:

- <u>Maximum height:</u> 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 800mm-1000mm (32 inch -40 inch).
- <u>Depth</u>: If there is a table / shelf provided, there should be leg and knee space for the wheelchair with a minimum clear knee space of 700mm (28 inch) high and 280mm-300mm (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.

# **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.)

# 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. 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

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



## 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.

Audio Spoken			Screen Text
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 पसन्दकी 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	ध्वनि नियंत्रण. आवाज बढ़ाने के लिए एक दबाएं. आवाज कम करने के लिए दो दबाएं.आगे बढ़ने के लिए एन्टर	PRESS "1" TO INCREASE THE VOLUME PRESS "2" TO DECREASE THE VOLUME	AAWAJ BADHANE KE LIYE "1" DABANYE AAWAJ KAM KARNE KE LIYE "2" DABANYE

Enter key is right of number 9 (Beeps to know volume increase / decrease)	दबाएं.एन्टर बटन सं ख्या <b>9</b> की दाहिनी और है.	PRESS ENTER TO PROCEED.	AAGE JANE KE LIYE "ENTER" DABANYE
The audio session allows you to hide and display ATM screens for privacy during a banking session To hide the ATM screens please press 1 To display the ATM screens please press 2	यह ऑडियो सत्र्, आपके बैंकिंग सत्र्, के दौरान, आपकी गोपनीयता के लिए आपको एटीएम स्किरीनें छुपाने या दिखाने की सुविधा देता है. एटीएम स्किरीन छुपाने के लिए, कृपया एक दबाएं एटीएम स्किरीन दिखाने के लिए, दो दबाएं.	PRESS "1" TO HIDE THE SCREENS PRESS "2" TO DISPLAY THE SCREENS	SCREEN CCHIPANE KE LIYE "1" DABANYE SCREEN DIKHANE KE LIYE "2" DABANYE
Your ATM screens are hidden.	आपकी एटीएम स्किरीन्स प्रदर्शित नहीं की जा रही हैं.		
Your ATM screens are displayed	आपकी एटीएम स्किरीन्स प्रदर्शित की जा रही हैं.		
The audio session allows you to hear a short-ATM- orientation before starting your transaction, To skip the orientation, please press 1, To hear the orientation, please press 2.	ये ऑडियो सत्र्, लेनदेन शुरू करने से पहले, एटीएम इस्तेमाल करने सम्बन्धी संक्षिप्त जानकारी, सुनने की सुविधा प्रदान करता है.यदि आप एटीम इस्तेमाल करने सम्बन्धी जानकारी नहीं सुनना चाहते, तो कृपया एक दबायें, यदि आप एटीएम इस्तेमाल करने सम्बन्धी जानकारी सुनना चाहते हैं, तो दो दबायें.	PRESS "1" TO SKIP THE ATM ORIENTATION PRESS "2" TO HEAR ATM ORIENTATION	ATM NIRDESHON KO BAND KARNE KE LIYE "1" DABANYE ATM NIRDESHON KO SUNANE KE LIYE "2" DABANYE
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 एटीम इस्तेमाल करने सम्बन्धी संक्षिप्त जानकारी, सुनने का, विकल्प चुना है.		
You have chosen, not to, listen to the orientation.	आपने एटीम इस्तेमाल करने सम्बन्धी संक्षिप्त जानकारी, नहीं सुनने का, विकल्प चुना है.		
To repeat orientation message press 1 or to continue your transaction press 2.	संक्षिप्त जानकारी फिर से सुनने के लिए १ दबांए.आगे बढ़नेके लिये २ दबांए.	PRESS "1" TO REPEAT ATM ORIENTATION PRESS "2" TO CONTINUE	ATM NIRDESHON KO DOBARA SURANE KE LIYE "1" DABANYE 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 और है.	XYZ Bank's bra displaying bili PLEASE INSERT KRIPAYA AP PRAVISTH	ngual text YOUR CARD NA CARD
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, खातेका बैलेंस्जानने के लिए, X दबाएं, पिन नम्बर में बदलाव करने के लिये, X दबायें.	XYZ Bank's bra PLEASE SELE TRANSAC	ECT YOUR

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

**ANNEXURE -II** 

# SUGGESTED PROCESS FLOW FOR CASH WITHDRAWAL BY A VISUALLY CHALLENGED PERSON AT AN ATM

ADOPTED BY

**INDIAN BANKS' ASSOCIATION** 

# Suggested process flow for cash withdrawal by a visually challenged person at an ATM by the Working Group constituted by the Sub-Committee consisting members <u>from State Bank of India, ICICI Bank and HDFC Bank</u>

Customer inserts the Audio jack:

1.	Welcome to XYZ Bank ATM.
2.	Please select the language. Press 1 – English 2 - Hindi
3.	You have selected English/Hindi as your language of choice. Press 1 – to increase the volume 2 –to decrease the volume
4.	The audio session allows you to hide or display ATM screens for privacy during a banking session. Press 1 – to hide the ATM screen 2 –to display the ATM screen
5.	Screen hidden for privacy/Your ATM screens are displayed. The audio session allows you to hear a short ATM orientation before starting your transaction. Press 1 – to hear orientation 2 - to skip orientation
6.	To repeat orientation message, press 1 – yes 2 - to continue your transaction
7.	Please insert your ATM cum Debit card and remove it.
8.	Please enter your PIN and press enter.
9.	Please select your transaction. Press 1 – Cash Withdrawal 2 – Balance Enquiry 3 – PIN Change

#### Suggested process flow for Balance Enquiry by a visually challenged person at an ATM

Customer inserts the Audio jack: (Steps from 1 to 9 are common)

10.	You have selected Balance Enquiry. Press 1 – To Confirm 2 – To go back
11.	Please select your account.         1 – Savings account         2 – Current account
12.	Please wait. We are processing your request.
13.	Balance in your Account is Rs 100/ Please collect your receipt.
14.	Your transaction is complete. Thank you for using XYZ Bank ATM.

#### Suggested process flow for PIN Change by a visually challenged person at an ATM

Customer inserts the Audio jack: (Steps from 1 to 9 are common)

Language of Step -7 may vary depending on the type of card reader at ATM (Dip card reader or motorized one). In case of transaction failure at any stage the message that appears on the screen is to be read out to the customer. The orientation will be about the location of slots like key pad, cash dispenser, Card reader, transaction receipt and description of key pad etc.

#### Additional features:

### 1. Feature of skipability for fast ATM operation.

If a Visually Challenged customer inserts the Card after insertion of audio jack, then the default language will be English and steps 1 to 6 will be skipped for fast operation.

#### 2. Feature of Enabling Talking Mode through any number key.

After completion of first ATM operation if a customer who is using talking mode, wishes to continue with more ATM operations, he/she should be able to enable the talking mode again by pressing any one of number key.( To avoid removing and inserting headphone jack for  $2^{nd}/3^{rd}$  transactions.)