



Accessible ATMs in India – A Retrospective and Prospective View

**A case for enhancing accessibility of ATMs for
persons with visual impairment**

by

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Executive Summary

As the website talkingatmindia.org completes a decade of its service, the XRCVC, St. Xavier's College (Empowered Autonomous Institution), Mumbai (hereafter referred to as XRCVC) re-emphasises its commitment to championing financial inclusion for persons with disabilities, more specifically of persons with visual impairment, in mainstream financial systems. In this paper, the XRCVC builds a case to advocate the necessity of ensuring updated data regarding locations of accessible ATMs is made available by banks and the need and feasibility of making Unified Payments Interface (UPI)-enabled cardless cash withdrawal accessible for persons with print disabilities, in particular for those with visual impairment.

This paper begins with a review of the relevant legal mandate as put forth by the United Nations Convention on the Rights of Persons with Disabilities (2006) which India ratified in 2008, the subsequently enacted Rights of Persons with Disabilities Act (2016) and the accessibility standards laid down by the Bureau of Indian Standards. This provides the context for the regulatory directives notified by the Reserve Bank of India (RBI) and the Indian Banks's Association (IBA) for banks to create accessibility in their banking services which enables inclusion of persons with disabilities in mainstream financial services.

The paper then a brief overview of the ground reality of accessibility of banking services including digital banking websites and apps and accessibility of ATMs as of today based on XRCVC's ongoing monitoring of various banking services for enabling inclusion of persons with disabilities.

Further, it builds a case for the need of certain follow-up mechanisms to ensure that persons with disabilities are not denied basic banking services – primarily by sharing of updated data by banks about locations of accessible ATMs and creating accessibility of UPI-enabled ATM transactions.

This paper has been drafted for policy makers, banks and bankers and ATM manufacturers, vendors and deployers with recommendations for a roadmap for making UPI-based ATM transactions accessible for persons with visual impairment. It not only provides basic policy formulation recommendations, but also addresses the technical aspects of making the step-by-step process of UPI-based ATM transactions accessible for persons with visual impairment.



1. Background

1.1. United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)

The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD, 2006) upholds the rights of persons with disabilities to ensure their full and effective participation in society. Fundamental to this is accessibility, on which the UNCRPD guides the State Parties as, “To enable persons with disabilities to live independently and participate fully in all aspects of life, States Parties shall take appropriate measures to ensure to persons with disabilities access, on an equal basis with others, to the physical environment, to transportation, to information and communications, including information and communications technologies and systems, and to other facilities and services open or provided to the public, both in urban and in rural areas.” (United Nations, 2006)

In 2007, India ratified the UNCRPD and became a State Party to the UNCRPD thus making it obligatory for it “to ensure and promote the full realization of all human rights and fundamental freedoms for all persons with disabilities” (United Nations, 2006).

1.2. Rights of Persons with Disabilities Act (2016)

Subsequent to India’s ratification of the UNCRPD in 2007, the Rights of Persons with Disabilities Act (2016) was enacted. The RPwD Act (2016) in its preamble itself upholds the principle of accessibility as stated by the UNCRPD as a fundamental principle for the empowerment of persons with disabilities. To this effect, it has been stated in the section 40 of the said Act that the Central Government shall lay down standards for accessibility for the “physical environment, transportation, information and communications, including appropriate technologies and systems, and other facilities and services provided to the public in urban and rural areas.” (The Rights of Persons with Disabilities Act, 2016).

Thus, the UNCRPD (2006) and the RPwD Act (2016) are based on the social model and human rights models of disability. They view disability as a form of human diversity and uphold the rights of persons with disabilities as same as everyone else in society. Moreover, they make it the obligation of society to create systems that ensure a barrier-free environment for persons with disabilities to ensure that they are able to independently and effectively participate in all aspects of society.



1.3. Bureau of Indian Standards - IS-17802 Parts 1 and 2 (2021-2022)

The Bureau of Indian Standards recognised that given the RPwD Act (2016), many sectors, including banking have through consultations with stakeholders either formulated afresh or updated their current accessibility standards. The BIS developed the IS-17802 Parts 1 and 2 so that there is a “cohesive, consistent and cross-cutting standard on accessibility requirement for ICT products and services used in all sectors” (Bureau of Indian Standards, 2021). The BIS has laid down a comprehensive document that not only specifies needs of persons with different kinds of disabilities through functional performance statements, but also lays down specifications for incorporating accessibility into “wide range of ICT products and services relating to information and communication, including telecom services, web-based services, electronic and print services, digital and virtual services.” (Bureau of Indian Standards, 2021). Thus, the IS-17802 Parts 1 and 2 provide the much-needed boost to the mandate of ensuring accessibility of all products and services as laid down by the RPwD Act (2016).

The Indian Information and Communication Technology (ICT) Accessibility Standard IS-17802 has dedicated guidelines for all ICTs as per categories such as stationary ICT, web, mobile and embedded software and non-web documents. The requirements given under the section on ‘Stationary ICT’ of the standard are useful in the design and procurement of a number of accessible ICT products like ATM, cash/cheque depositor, passbook printer and other self-operated kiosks. The embedded software installed in the stationary ICT used by financial institutes can be made accessible for maximum users by adhering to the requirements mentioned in Section 11 on ‘Software’ of said Standard. This same section is applicable for the financial applications developed for various mobile platforms.

2. Inclusion of Persons with Visual Impairment in the Banking System

2.1. Background – XRCVC’s Advocacy Program for Financial Access

The XRCVC (www.xrcvc.org) was set up as an assistive technology resource centre for persons with visual impairment in higher education in 2003. Over the years, as it grew into a direct support and services centre for persons with disabilities, it began its advocacy program to create access in mainstream society for persons with disabilities. Some of the key achievements of these advocacy program include providing print access to persons with print disabilities through the Copyright (Amendment) Act 2012 and creation of access in education for students with visual impairment through changes in rules of CBSE, HSC, Physiotherapy and Psychology courses.



Whereas access to education and employment were surely opening doors to equal employment opportunities for persons with visual impairment, the XRCVC was cognizant of the fact that pre-held myths and erroneous rules and regulations kept financial and economic independence of gainfully employed persons with blindness and low vision out of reach.

As part of its financial access initiative, the XRCVC actively worked towards equitable rules and regulations for availing banking and other financial services as also for practical ground-level technology solutions to create access.

Through its advocacy initiatives, the XRCVC was instrumental in getting the RBI to issue new guidelines that upheld the rights of persons with blindness and low vision to independently open, operate and use all financial services therein. Moreover, the XRCVC has also closely worked with the IBA to ensure effective implementation of these guidelines.

2.2. Notifications of the Reserve Bank of India

The Reserve Bank of India has issued multiple notifications regarding the inclusion of persons with visual impairment in mainstream banking as a result of the powers conferred upon it by the Banking Regulation Act (1949) to supervise and control various banking companies, particularly by the Section 35A of the Act which specifies that the RBI can issue such directions as it deems fit in public interest or in the interest of banking policy, and that the relevant banking company or banking companies, as the case may be, are bound to comply with such directions.

2.2.1. RBI Notification dated 4th June 2008 – Banking Facilities for Persons with Visual Impairment

Persons with visual impairment historically faced great barriers to access to banking services on account of being treated at par with illiterate persons due to the practical challenges they faced while signing documents. The RBI through a notification dated 4th June 2008 directed 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. It has also directed that Banks must also advise their branches to render all possible assistance to the visually challenged for availing the various banking facilities.

2.2.2. RBI Notification dated 13th April 2009 – Accessibility of ATM and Branches

In this notification, the RBI has advised banks to take necessary steps to provide all existing ATMs / future ATMs with ramps for wheelchair users / persons with disabilities to be able to easily access them. Moreover, the height of the ATM should be such that it 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 / wheelchair users can enter the bank branches and conduct business without much difficulty.

Further, banks were obligated to make at least one third of new ATMs installed as talking ATMs with Braille keypads and to place them strategically in consultation with other banks to ensure that at least one talking ATM with Braille keypad is available in each locality for catering to needs of persons with visual impairment. Banks were also advised to notify their customers of the location of these ATMs.

2.2.3. RBI Notification dated 5th September 2012 – Accessibility of Internet Banking

The RBI took cognizance of the request made by Office of the Chief Commissioner for Persons with Disabilities regarding inaccessibility of internet banking facilities for persons with visual impairment and notified banks to strictly adhere to instructions contained in the previous circulars dated June 4, 2008 and April 13, 2009 and extend all banking facilities to persons with blindness, low-vision and other disabilities.

2.2.4. RBI Notification dated 21st May 2014 – Ensuring Compliance to Notification Regarding Accessibility of Branches and ATMs

The RBI found many banks to be non-compliant with the above circulars and were advised to provide, inter alia, ramps in all existing and future ATMs, and make at least one third of new ATMs installed as talking ATMs with Braille keypads.

Furthermore, it notified banks to provide magnifying glasses at all bank branches for the use of persons with low vision for them to carry out banking transactions with ease. A notice about the availability of the magnifying glass and other facilities for persons with disabilities is to be displayed at a prominent place.

Banks were also advised to report the progress made in this regard periodically to their respective Customer Service Committee of the Board and ensure compliance.

2.2.5. RBI Notification dated 11th June 2015 – Notification for Compliance of Accessibility of Banking Branches

This circular was released in the light of RBI's cognizance that banks have not complied to the earlier circulars directing that they make at least one third of the new ATMs installed as talking ATMs with Braille keypad. It directed that banks should make all new ATMs installed from July 1st, 2014, as talking ATMs with Braille keypads and lay down a road map for converting existing ATMs as talking ATMs with Braille keypads as advised in the circular dated April 24th, 2009. This was also directed to be reviewed from time to time by the Board of Directors/Customer Service Committee of the Board.



2.2.6. RBI Master Circular dated 1st July 2015- Customer Service Guidelines for persons with disabilities

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

Banks were advised to take necessary steps to provide all existing ATMs / future ATMs with ramps so that wheelchair users / persons with disabilities can easily access them. Care was also to be taken to make arrangements in such a way that the height of the ATMs does not create an impediment in their use by wheelchair users. However, in cases where it was impracticable to provide such ramp facilities, whether permanently fixed to earth or otherwise, this requirement may be dispensed with, for reasons recorded and displayed in branches or ATMs concerned.

Banks were also to take appropriate steps, including providing of ramps at the entrance of the bank branches, wherever feasible, so that the persons with disabilities/wheelchair users can enter bank branches and conduct business without difficulty. Banks were advised to report the progress made in this regard periodically to their respective Customer Service Committee of the Board and ensure compliance.

Provision of banking facilities to persons with visual impairment

In order to facilitate access to banking facilities by visually challenged persons, banks were advised to offer banking facilities including cheque book facility / operation of ATM / lockers etc., to the visually challenged as they are legally competent to contract. This was reiterated in the order passed by the Honourable Court of Chief Commissioner for Persons with Disabilities, dated September 5th, 2005.

Further, in Paragraph 14 of the above Order, the Honourable 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. Banks were therefore directed 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., were also to be invariably offered to the visually challenged without any discrimination.

Banks were asked to advise their branches to render all possible assistance to the visually challenged for availing the various banking facilities.

Implementation of Talking ATMs with Braille keypads to facilitate use by persons with visual impairment

Banks were to make all new ATMs installed from July 1st, 2014, as talking ATMs with Braille keypads. Banks were directed to lay down a road map for converting all



existing ATMs as talking ATMs with Braille keypads and the same may be reviewed from time to time by the Customer Service Committee of the Board.

In addition to the above, magnifying glasses were also to be provided in all bank branches for the use of persons with low vision, wherever required for carrying out banking transactions with ease. The branches should display at a prominent place notice about the availability of magnifying glasses and other facilities available for persons with disabilities.

2.2.7. RBI Notification dated 1st July 2017 – Regarding Withdrawal of Pension by Old / Sick / Disabled / Incapacitated Pensioners

Banks were advised to sensitise staff members to enable old/sick/ disabled/ incapacitated pensioners to operate their accounts for pension disbursement. They were directed with the following guidelines-

- Wherever thumb or toe impression of the old/sick pensioner is obtained, it should be identified by two independent witnesses known to the bank, one of whom should be a responsible bank official.
- Where the pensioner cannot even put his/her thumb/toe impression and also would not be able to be physically present in the bank, a mark can be obtained on the cheque/withdrawal form, which should be identified by two independent witnesses, one of whom should be a responsible bank official.

2.2.8. RBI Integrated Ombudsman Scheme

This scheme amalgamated three ombudsman schemes of RBI - banking ombudsman scheme of 2006, ombudsman scheme for NBFCs of 2018 and ombudsman scheme of digital transactions of 2019.

The unified ombudsman scheme provides redress of customer complaints involving deficiency in services rendered by RBI regulated entities viz. banks, NBFCs (Non-banking Financial Companies) and pre-paid instrument players if the grievance is not resolved to the satisfaction of the customers or not replied within a period of 30 days by the regulated entity.

It also includes non-scheduled primary co-operative banks with a deposit size of Rs 50 crore and above. The integrated scheme makes it a “One Nation One Ombudsman’ approach and jurisdiction.

2.2.9. RBI Notification dated 9th November 2017 - Banking Facility for Senior Citizens and Differently Abled Persons

The RBI took cognizance of how banks discouraged or turned away senior citizens and differently abled persons from availing banking facilities in branches. It directed the banks to put in place appropriate mechanism with the following specific



provisions for meeting the needs of such customers so that they are able to avail of the bank's services without difficulty.

Banks were advised to implement these instructions by December 31st, 2017, in letter and spirit and give due publicity in their bank branches and website.

- a. Dedicated Counters/Preference to Senior Citizens, differently abled persons
- b. Ease of submitting Life Certificate: Life Certificate be updated promptly in the Core Banking Solution (CBS) to avoid any delay in credit of pension.
- c. Cheque Book Facility: Banks shall not insist on physical presence of any customer including senior citizens and differently abled persons for getting cheque books.
- d. Automatic conversion of status of accounts into 'Senior Citizen Accounts' on the basis of date of birth maintained in the bank's records.
- e. Additional Facilities to visually impaired customers -regarding operations of accounts through identification of thumb/toe impression/mark by two independent witnesses and authorising a person who would withdraw the amount on behalf of such customer shall also be extended to the visually impaired customers.
- f. Ease of filing Form 15G/H
- g. Doorstep Banking-banks are advised to make concerted effort to provide basic banking facilities, such as pick up of cash and instruments against receipt, delivery of cash against withdrawal from account, delivery of demand drafts, submission of Know Your Customer (KYC) documents and Life certificate at the premises/ residence of such customers.

2.2.10. RBI Notification 11th March 2019 – Updating Status of Action Related to Website Accessibility

This circular referred to the recommendations of the IBA Working Group formed to look into comprehensive banking services for all categories of persons with special needs. It particularly referred to the guidelines issued to make banks' websites accessible as per the International Accessibility Standards under the purview of the 'Accessible India Campaign' launched by the Government of India. In light of this, IBA was directed to apprise the RBI of the action taken regarding website accessibility.

2.2.11. RBI Communication 22nd February 2024 – Compliance to Accessibility Norms and Records of Accessible Branches and ATMs

The RBI issued this communication in light of its incognito visits of branches of banks during which it was found that there are violations of the accessibility norms laid down by the RBI Master Circular dated 1st July 2015. This circular is addressed to all



public sector, private sector and foreign banks and it not only directs them to ensure that there is compliance of the accessibility norms laid down in the Master Circular but also to furnish records regarding branches and ATMs where these accessibility norms have and have not been implemented.

2.3. Indian Banks' Association Guidelines

Given RBI's directives to create accessibility in banking for persons with disabilities, the Indian Banks' Association worked closely with XRCVC, St. Xavier's College, Mumbai to develop appropriate guidelines and standards for accessibility of banking services.

2.3.1. IBA Guidelines dated 18th November 2008 – Guidelines Providing Banking Facilities to Visually Impaired Persons

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.

Further, it was suggested that when fingerprint 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 persons with visual impairment.

2.3.2. IBA Document dated 27th February 2013 – Standards of Accessible ATMs

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.

2.3.3. IBA Circular dated 16th January 2014 - Poster to be displayed at the entrance of accessible ATMs.

This notification stated that India has over 15 million visually challenged persons, and banks need to make special efforts to ensure that they are able to meet banking needs of these persons. In line with the RBI guidelines, all the banks have made efforts to provide banking services to visually Challenged Persons.

The IBA Sub-Committee on ATM System for Visually Challenged Persons had deliberated on the issue of talking ATMs and has designed Standards for Accessible ATM with Complete example of the workflow and screen shots for an Accessible ATM as adopted by Accessible ATMs which is complete, comprehensive and



extremely user friendly. 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. The Standards for Accessible ATM with Complete example of the workflow and screen shots for an Accessible ATM as adopted by Accessible ATMs was thereafter circulated to member banks for adoption vide IBA Guidelines.

2.3.4. IBA Notification dated 5th February 2015 – Model Customer Rights Policy

In line with the RBI Draft Charter of Customer Rights comprising the following five basic customer rights -

- (i) Right to Fair Treatment
- (ii) Right to Transparency and Honest Dealing,
- (iii) Right to Suitability,
- (iv) Right to Privacy,
- (v) Right to Grievance Redress and Compensation.

Customer protection is an integral aspect of financial inclusion. The following comprehensive Customer Rights Policy based on domestic experience and global best practices is brought out to enhance such protection.

The Customer Rights Policy enshrines basic rights of the customers of the banks regulated by the Reserve Bank of India. It spells out the rights of the customer and also the responsibilities of the bank. The Policy applies to all products and services offered by the bank or its agents, whether provided across the counter, over phone, by post, through interactive electronic devices, on internet or by any other method.

2.3.5. IBA Notification 5th February 2015 - Model Policy for Grievance Redressal in Banks

The bank's policy on grievance redressal follows the under noted principles.

- Customers be treated fairly at all times
- Complaints raised by customers are dealt with courtesy and on time
- Customers are fully informed of avenues to escalate their complaints/grievances within the organization and their rights to alternative remedy, if they are not fully satisfied with the response of the bank to their complaints.



- Bank will treat all complaints efficiently and fairly as they can damage the bank's reputation and business if handled otherwise.
- The bank employees must work in good faith and without prejudice to the interests of the customer.

2.3.5. IBA Report dated 4th June 2018 – Report of Working Group of IBA on Banking Facilities for Persons with Special Needs

IBA had formed a Working Group comprising of bank officials, representatives from RBI and representatives from persons with disability organisations to look into comprehensive banking services to all categories of persons with special needs. The report focuses on the following four key areas-

- a. Overall accessibility
- b. Physical accessibility, at branch
- c. Accessibility of Credit
- d. Accessibility in use of Technology, websites, Apps, etc

It is thus important to note here that not only have the RBI and the IBA given detailed guidelines to ensure that banking services are made accessible for persons with disabilities, particularly for those with visual impairment, but also through various communications have followed-up on the implementation of these so that persons with disabilities and visual impairment are not deprived of access to basic rights such as availing banking services independently.

3. Review of Accessibility of ATMs for Persons with Visual Impairment

The XRCVC has periodically reviewed the status of accessibility of mainstream banking and its various services including digital banking for persons with disabilities, in particular for persons with visual impairment.

XRCVC published a detailed report in 2022 titled "Banking on Accessibility – a case for accessible banking for persons with disabilities" which is an in-depth report on the accessibility of banking services for persons with visual impairment, with a focus on accessibility of digital banking services.

This report states that despite legal precedence and various guidelines put forth by the RBI and the IBA, there are gross problems to access to banking services faced by the persons with disabilities, which include:

- Continuing to treat PwDs as illiterate.



- Signature mismatch
- Procedural hurdles in money transfer
- Poor compliance with Accessible ATM Regulations
- Inaccessible Touch screen devices
- Inaccessible websites and apps as also CAPTCHA
- Accessibility issues of third-party wallets and UPI apps
- Quick Session Time Out
- Poor Customer Care
- Lack of awareness on redressal mechanism
- Communication challenge for hearing impaired customers.
- Issues with handling currency notes and coins

The report further states that when it comes to digital banking, there are three major issues to access to the digital economy for persons with disabilities.

- **Lack of Internet Infrastructure**

In India, even today only 50% of the population has internet access. The gap in rural areas is even more. Close to 70% of persons with disabilities live in rural areas, according to the report 'Disabled Persons in India-A Statistical Profile 2016' and about 1 crore persons with disabilities are in the age group 10-29, for whom education and skill development are vital. Without proper internet access and adequate infrastructure, the PwDs are forced to visit the branches, the skill development and employability of this big chunk of population is also grim.

- **Lack of Access to Assistive Technology**

The accessibility to assistive technology like screen-readers, magnification devices, and augmentative and alternative communication (AAC) devices, which enable persons with disabilities to consume the digital information, is low in developing countries. High cost of such devices puts them out of reach for many. Without a screen reader, a visually impaired person cannot consume majority of digital information. Therefore, despite shifting of information online, if there is no proper access to assistive technology that aids in consuming the information, the information is of no-good use. Even when assistive technology is available, its functionality is further impacted by the fact that websites are not compliant with accessibility norms.

- **Disability-friendly content**

The content should also be disability friendly. For example, many educational and skill development videos are not accessible to people with hearing impairment



because they don't include a sign-language interpretation. Making all the content on initiatives disability friendly will go a long way in furthering the accessibility mission. Therefore, the focus should not only be on digitizing the content but also on making it disability friendly.

So, today even if a Person with Disability has access to the internet s/he should have assistive technology (ex: screen reader) that enables consuming the digital information and also the information should have been made disability friendly (ex: sign language interpretation). Therefore, bridging the digital divide to enable persons with disability requires not only addressing the internet infrastructure challenge but also the challenge of information consumption. (Xavier's Resource Centre for the Visually Challenged (XRCVC), St. Xavier's College, Mumbai, 2022)

Thus, there is an urgent need for banks to implement the various guidelines and standards put forth by the RBI and the IBA, not only in letter, but also in spirit to ensure that persons with disabilities are not deprived of essential services which is a violation of their basic rights.

4. Enhancing Accessibility of ATMs for Persons with Visual Impairment

The website Talking ATM India (<https://talkingatmindia.org>), a service started by two volunteers with visual impairment and currently maintained by them under the aegis of the XRCVC is a website that provides information about accessible ATMs and also helps them locate the nearest accessible ATM with ease. As it completes a decade of its service, XRCVC has taken the initiative to take stock of the accessibility of ATMs services and provide future direction to enhance accessibility to foster inclusion of persons with visual impairment in banking services.

For this, there are two services that need to be addressed urgently to ensure that persons with visual impairment have access to basic banking services –

1. Updating data on accessible ATMs by banks
2. Making UPI-enabled ATM transaction accessible
3. Need for policy directives from the RBI

These have been discussed in detail in this section.

4.1. Updating Data on Accessible ATMs by Banks

While the Talking ATM India website provides an important service in providing persons with visual impairment the location of the nearest Talking ATM in a convenient manner, a major challenge faced by this service is the data available from banks is outdated, the last update having been in 2019. There is a pressing



need to ensure the data on location of accessible Talking ATMs is updated by the banks so that accurate data can be shared with the end-user.

The RBI has recently issued a communication dated 22nd February 2024 directing banks to comply with accessibility norms laid down for branches and ATMs and to provide data on accessible ATMs and branches where these norms have been implemented and could not be implemented. This is a positive step in this direction and the mandate of this circular needs to be urgently implemented ensuring persons with disabilities can avail basic banking services independently and seamlessly as is their right.

It is important to add here that the RBI should direct the banks to publish this data in accessible formats e.g. Microsoft Excel/Accessible PDF and should have the complete address of the ATM location including the PIN code.

In addition, banks may provide the data to XRCVC (sam@xrcvc.org) for updating on the Talking ATM India website, a repository of all banks' data on accessible and talking ATMs in India. The website provides across banks list of Talking ATMs when searched by area or by PIN or by auto geo location on the go.

In the year 2018, XRCVC received the data from many banks which is made available in the accessible format on the Talking ATM India accessible web search locator portal.

We further recommend here to implement a policy of regular updation of this data on a half-yearly basis at the minimum and reporting it on the bank's website and to the RBI. This will serve two important purposes – providing accurate data to the end-user regarding availability of the Accessible ATMs and serving as an input for planning the rollout of further Accessible ATMs ensuring compliance to the norms and simultaneously monitoring compliance to the norms laid down.

4.2. Making UPI-enabled ATM transaction accessible

Given the above, there is a further need to build accessibility into new services like UPI-enabled cash withdrawal provided by banks to their customers. This will ensure inclusion of persons with disabilities in mainstream banking and enable their financial independence.

The most important reason for building accessibility into this service is that despite legal mandate and RBI guidelines that persons with visual impairment should have access to all banking facilities without any discrimination, the ground reality even today is that persons with visual impairment are being denied ATM cards by banks. Thus, making cardless cash withdrawal on ATMs accessible can be a stop-gap arrangement that helps them avail basic banking facilities.



UPI-based transactions have transformed the Indian economy and created avenues for inclusion for various marginalised sections of society, including persons with disabilities. There is a challenge presented by the accessibility of the UPI apps that are currently approved for the UPI – enabled cardless cash withdrawal transaction. These can be addressed by policy directives to allow for these transactions to include accessible UPI apps such as Google Pay that have been adopted by persons with visual impairment in their daily transactions.

It is important to mention here that the AI-enabled voice-based Hello UPI transaction support service currently being developed by the NPCI has immense potential to bring persons with visual impairment, among other marginalised groups, into the fold of mainstream financial services. Further research and development of its accessibility will ensure its usability for persons with visual impairment providing them with robust support for UPI-based transactions, including UPI-enabled ATM transactions.

4.2.1. Recommendations for Creating Accessible UPI-enabled ATM Transactions

Some key principles that will support this are:

1. Auditory output for all visual elements of the transaction process.
2. Mapping of touch-screen functions to the keypad.
3. Compensatory time for QR code display in accessible mode as users will have to process two simultaneous audio outputs – one from the Talking ATM machine and one from the UPI app.
4. Standard positioning of generated QR code on the ATM screen in talking mode operation for better orientation for visually impaired users.
5. Banks to ensure accessibility of their phone-based UPI apps that support these transactions or allowing accessible Fintech UPI apps to be a part of this service.

A detailed recommendation for this can be found in the **Appendix A** of this paper.

4.3. Need for Policy Directives from the RBI

It is imperative that policy directives back the implementation of making UPI-enabled ATM transactions accessible. As there is a legal mandate from the Rights of Persons with Disabilities Act (2016) to ensure accessibility in all services, including financial services and with the precedence of RBI's regulatory mandate dated 11th June 2015 that all new ATMs installed from July 1st, 2014 as talking ATMs with Braille keypads, the RBI under the section 35 of the Banking Regulation Act (1949) can issue further guidelines regarding making the newly introduced ATM feature of UPI-enabled cash withdrawal accessible.



The RBI should also direct banks to ensure there is a clear implementation plan for accessible ATMs given the Master Circular of 2015 and the latest notification of 2024. The directive should also outline a clear monitoring mechanism for on-ground implementation including clear instructions for operational maintenance to ensure existing ATMs do not become non-functional.

It is important to note here that the section 4.1.2 of the IS 17802 (Part 2): 2022 recognises that an ICT product or service passes through various stages in the value chain, and puts the onus of the “conformity assessment of accessibility should be made at the stage when the final delivery and use happens.” (Bureau of Indian Standards, 2022). Thus, RBI should clarify to the banks that the onus lies on them to ensure that the ATM machine conforms to accessibility standards regardless of the manufacturer, vendor or deployer of the ATM machine.

5. Conclusion

It has been time and again found that there are persistent barriers to rightful access to basic banking services for persons with disabilities, particularly those with visual impairment, despite legal mandate by the Rights of Persons with Disabilities Act (2016) and the regulatory directives by the Reserve Bank of India and Indian Banks' Association. Addressing key pressing concerns regarding Accessible ATMs such as ensuring updated accurate data for them and building in accessibility in UPI-enabled cardless cash transactions will be an important cog in the wheel to facilitate financial independence of persons with disabilities. Key to this are policy directives by the RBI and IBA with clear, enforceable standards that mandate the implementation of these, without which the risk of exclusion of persons with disabilities from basic services remains high and it hinders their full and effective participation in economic and social spheres of life.



Appendix A – Recommended Workflow for Making UPI-Enabled Transactions Accessible for Persons with Visual Impairment

For Users with Total Blindness

The transaction features of audio startup on insertion of the headphone in the headphone jack, welcome message and language options and volume control options will continue to function as they currently are.

In the Hide/ Blankout screen option it is necessary that an audio message alerts the user that even if the screen is hidden, if the UPI-enabled transaction is to be used then the screen will come on for display of QR code and will stay on till the QR code is scanned and the transaction moves to the next step.

The Help / Orientation Functionality will remain as is as it orients the user to all the aspects that are essential for an UPI transaction.

Transaction Menus and Processes – the principles enlisted in this section of the Standards for Accessible ATMs also remain the same in spirit for UPI transactions. A sample workflow of an accessible UPI-based transaction is summarised below:

Recommended Workflow for QR UPI-based Cardless Cash Withdrawal with Talking Mode / Voice Guidance (VG):

Standard workflow with card usage for balance enquiry, cash withdrawal and PIN change with addition of UPI QR based cardless cash withdrawal option. This workflow is provided as offline and online modes.

- First part is prior to selection of UPI-based transaction as an option (offline mode)
- Second part is after selection of a UPI-based transaction (online mode)

VG Workflow for the First part - Offline mode

Customer plugs in the headphone into the ATM audio jack. The talking mode / voice guidance is enabled.

1. Welcome to XYZ Bank ATM.



2. Please select the language.

Press

1 – for English

2 – for 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 screens

2 - to display the ATM screens

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 the ATM orientation

2 - to skip the ATM orientation

6. To repeat orientation message,

Press

1 – to repeat

2 - to continue your transaction



7. Please select your transaction.

Press

1 - for card transaction,

2 - for cardless cash withdrawal transaction

If user selects option 2, the following online workflow to follow.

VG Workflow for the Second part - Online mode if UPI- based cash withdrawal is chosen.

8. You have selected Cardless Cash withdrawal using UPI.

Press

1 - to confirm

2 - to go back

9. Please enter your amount, in multiples of 100 upto a maximum of Rs. 10,000/-

Or in case of pre-set withdrawal amounts by the bank/Fintech, vocalise each amount option and map it to the numbers on the keypad, i.e.:

9. Please choose an amount from the following options.

Press:

1 - for Rs. 500

2 - for Rs. 1000 and so on

10. You have entered/selected Rs. XXXX

Press

1 - to confirm if correct

2 - to re-enter if incorrect

3 - to cancel transaction and go back to main menu



11. The QR code is being generated. The QR code is displayed on the screen in (position of the QR code to be mentioned). Please scan it with your UPI app. The QR code will be displayed for 30 seconds.

12. After completion of 20 seconds, If the transaction is yet to be completed, an audio message as 'The QR code will be deactivated in 10 seconds',

Press

1 - for 30 seconds of additional time to complete the transaction

2 - for cancelling the transaction

Once the QR code is scanned and verification is done on the UPI phone app.

13. Your transaction has been verified and is being processed. The screen has now been hidden again.

14. Please collect your cash from the cash dispenser slot.

15. Thank you for using xxx bank accessible ATM.

We also suggest following additional workflow in line with a feature of skipability for fast ATM operation as mentioned in the IBA STANDARDS ON ACCESSIBLE ATM.

VG Workflow for quick mode cardless cash withdrawal

In the Talking ATM with feature of skipability or quick mode for fast ATM operation.

1. Welcome to XYZ Bank ATM.

2. Please select the language.

Press

1 - English

2 - Hindi

3 – Quick mode

4 – Cardless cash withdrawal

If the user selects option 4, then the default language will be English, and steps 1 to 6 will be skipped from the VG Workflow for the First part - Offline mode.



The VG Workflow for the Second part - Online mode if UPI- based cash withdrawal points 8 to 16 will continue.

For Users with Low Vision

The principles of accessibility laid down in the Standards for Accessible ATM are essentially the same for users with low vision.



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