Framework for Mobile Governance

Government of India
Department of Information Technology
Ministry of Communications and Information Technology
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Metadata of Document Framework for Mobile Governance

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12.	**Brief Description**	The Mobile Governance Framework of Government of India aims to utilize the massive reach of mobile phones and harness the potential of mobile applications to enable easy and round-the-clock access to public services, especially in the rural areas. The framework aims to create unique infrastructure as well as application development ecosystem for m-Governance in the country.
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Contents

Preamble

The National e-Governance Plan (NeGP) of the Government of India takes a holistic view of e-Governance initiatives across the country, integrating them into a collective vision. Around this idea, a massive countrywide infrastructure reaching down to the remotest of villages is being developed, and large-scale digitization of records is taking place to enable easy and reliable access over the internet. The ultimate objective is to bring public services closer home to the populace, as articulated in the Vision Statement of NeGP: "Make all Government services accessible to the common man in his locality, through common service delivery outlets, and ensure efficiency, transparency, and reliability of such services at affordable costs to realise the basic needs of the common man".

As an extension of this vision, and in cognizance of the vast mobile phone subscriber base of over 870 million in the country, the Government has decided to also provision for access of public services through mobile devices, thereby establishing mobile Governance (m-Governance) as a compelling new paradigm within the ethos of e-Governance.

1. Objectives

The m-Governance framework of Government of India aims to utilize the massive reach of mobile phones and harness the potential of mobile applications to enable easy and round-the-clock access to public services, especially in the rural areas. The framework aims to create unique infrastructure as well as application development ecosystem for m-Governance in the country.

2. Statement

Government of India will progressively adopt and deploy m-Governance in a time-bound manner to ensure inclusive delivery of public services to both the urban and rural populace in the country in accordance with this framework.

The following are the main measures laid down:

   i.   Web sites of all Government Departments and Agencies shall be made mobile-compliant, using the "One Web" approach.

   ii. Open standards shall be adopted for mobile applications for ensuring the interoperability of applications across various operating systems and devices as per the Government Policy on Open Standards for e-Governance.

   iii. Uniform/ single pre-designated numbers (long and short codes) shall be used for mobile-based services to ensure convenience.

   iv. All Government Departments and Agencies shall develop and deploy mobile applications for providing all their public services through mobile devices to the

extent feasible on the mobile platform. They shall also specify the service levels for such services.

3. Review

The Government of India reserves the right to review and revise the framework as and when required.

4. Definitions

Definitions of the common terms used in m-Governance can be seen at Annexure-I.

5. Implementation Strategy

A detailed implementation strategy for this framework has been provided in Annexure – II.

6. Point of Contact

Queries or comments related to this framework may be sent to the Additional Secretary (e-Governance), Department of Information Technology, Electronics Niketan, 6 CGO Complex, Lodhi Road, New Delhi – 110003. They can also be sent through e-mail to asegov@mit.gov.in or mgov@negp.gov.in .

ANNEXURE I: Definitions

Mobile Governance (m-Governance): A strategy and its implementation to leverage available wireless and new media technology platforms, mobile phone devices and applications for delivery of public information and services to citizens and businesses.

Mobile Services Delivery Gateway (MSDG): The shared technical infrastructure for enabling integration of mobile applications with the common e-Governance infrastructure and delivery of public services to the users. The objective of creating the MSDG is to put in place government-wide shared infrastructure and services to enable rapid development, mainstreaming and deployment of m-Governance services. It will enhance interoperability across various public services as well as reduce the total cost of operation of m-Governance services by providing a common pool of resources aggregating the demand for communication and e-Governance services, and act as a platform for various Government Departments and Agencies to test, rapidly deploy, and easily maintain m-Governance services across the country. The infrastructure will be based on open standards and will be developed as a cloud-based service.

One Web Approach: "One Web" means making, as far as possible, the same information and services available to users, irrespective of the device or the browser they are using. This implies that all Government Web sites should be compliant with mobile devices to enable users of such devices to access the same information and services (to the extent possible) as available, say, over the internet through computers.

Standard: A specification, method, process or practice for a system that is both widely used and accepted or is sanctioned by a Standards Organization. It may be noted that as per the Government Policy on Open Standards for e-Governance, the aforementioned organization should be a not-for-profit organization.

ANNEXURE II: Implementation Strategy

The initiative of the Government of India for this framework stems from the realization that globally as well as in India, millions of less-privileged individuals without access to the Internet have no realistic chance of accessing Government/ public services. Additionally, at the time of conceptualizing the e-Governance strategies globally, the penetration of mobile devices was very low and the capabilities of the devices to carry out data transactions were minimal. However, the scenario has changed completely during the last decade, both in terms of the penetration of mobile devices as well as their computing capabilities. Given the fact that majority of Indian citizens reside in rural areas, mobile devices are ideally suited as alternative access and delivery channels for public services in these areas.

It is important to mention here that m-Governance is currently evolving, not only in developing countries but also in the developed world. The success of the proposed initiative on m-Governance will greatly depend upon the ability of the Government Departments and Agencies to provide frequently needed public services to the citizens, create infrastructure for anytime anywhere mobile-based services, adopt appropriate open standards, develop suitable technology platforms, make the cost of services affordable, and create awareness, especially for people in underserved areas.

To ensure the adoption and implementation of the framework in a time-bound manner, following actions will be taken.

1. Creation of Mobile Services Delivery Gateway (MSDG)

MSDG is the core infrastructure for enabling the availability of public services through mobile devices. This will be developed and maintained by an appropriate agency within DIT. MSDG is proposed to be used as a shared infrastructure by the Central and State Government Departments and Agencies at nominal costs for delivering public services through mobile devices.

Various channels, such as voice, text (e-mail and SMS), GPRS, USSD, SIM Toolkit (STK), Cell Broadcast (CBC), and multimedia (MMS) will be incorporated to ensure that all users are able to access and use the mobile based services. The various delivery channels are expected to entail innovative ways of providing existing services as well as development of new services.

To ensure successful implementation of the platform with requisite levels of security and redundancy, following actions will be taken:

> **a) End User Interface:** End-user devices include landline phones, mobile phones, smart phones, personal digital assistants (PDAs), tablets, and laptops with wireless infrastructure. Mobile applications developed shall take into consideration appropriately the wireless-device interface issues, such as bandwidth limitations, micro-browser and micro-screen restrictions, memory and storage capacities, usability, etc.

> **b) Content for Mobile Services:** Due to lower-bandwidth and smaller-screen characteristics of mobile devices, successful development and deployment of m-Governance will require development of separate mobile-ready content. Similarly, to meet the needs of all the potential users, the applications will need to be developed in the relevant local languages for the various channels of delivery. Open standards

and open source software, to the extent possible, will be used to ensure interoperability and affordability of the content and applications developed.

c) Mobile Applications (Apps) Store: A mobile applications (m-apps) store will be created to facilitate the process of development and deployment of suitable applications for delivery of public services through mobile devices. The m-apps store shall be integrated with the MSDG and it shall use the MSDG infrastructure for deployment of such applications. It is proposed that the store will be based upon service oriented architecture and cloud based technologies using open standards as far as practicable. The open platform will be developed and deployed in conjunction with the MSDG for making the additional value added services available to the users irrespective of the device or network operator used by them.

d) Application Programming Interfaces (APIs) for Value-Added Services (VAS) providers: MSDG shall offer suitable APIs to VAS providers with appropriate terms and conditions to ensure interoperability and compliance with standards for development of applications for delivery of public services.

e) Mobile-Based Electronic Authentication of Users: For electronic authentication of users for mobile-based public services, MSDG shall incorporate suitable mechanisms including Aadhaar-based authentication. This will also help in ensuring appropriate privacy and confidentiality of data and transactions.

f) Payment Gateway: MSDG shall also incorporate an integrated mobile payment gateway to enable users to pay for the public services electronically.

g) Participation of Departments: The Government Departments and Agencies both at the Central and State levels will be encouraged to offer their mobile-based public services through the MSDG to avoid duplication of infrastructure.

2. Creation of Mobile Governance Innovation Fund

Department of Information Technology (DIT) shall create a Mobile Governance Innovation Fund to support the development of suitable applications by Government Departments and Agencies and also by third-party developers including start-ups. The fund shall be created and managed by DIT for a minimum period of 3 years. The objective of this fund will be to accelerate the development and deployment of the mobile applications across the entire spectrum of public services.

3. Creation of Knowledge Portal and Knowledge Management Framework on Mobile Governance

DIT shall develop and deploy a state-of-the-art knowledge portal and knowledge management framework that acts as a platform for awareness generation and dissemination for various Central Government Ministries and the State Governments. This will enhance the absorptive as well as the service provision capabilities of various stakeholders in m-Governance. Since m-Governance is in its nascent stage both in India and globally, the knowledge portal will act as a reference and guide for Government Departments and Agencies in India.

4. Creation of Facilitating Mechanism

An appropriate facilitating mechanism will be created to ensure compliance with the standards for mobile applications and ensure seamless interoperability of services and implementation of short and long codes for public services across multiple service providers. The proposed mechanism shall be established and managed by the Department of Information Technology, Government of India.

ANNEXURE III: Frequently Asked Questions (FAQs)

1. What is the purpose of setting up the MSDG?

The purpose of setting up the MSDG is to provide a one-stop ecosystem for enabling the delivery of various electronic government services through mobile devices in an efficient manner with minimum effort for the participating Government Departments and Agencies. MSDG will also help in enhancing the interoperability of mobile-based services among various Government Departments and reduce the total cost of development and deployment of applications for m-Governance services.

2. What are the functionalities that will be available in the MSDG?

MSDG will have facilitates such as hardware and software to test and deploy the m-Governance applications. It will have connectivity options for the citizens to apply for and receive public services through the mobile devices irrespective of the network operators to who they've subscribed. It will also have an integrated system for delivering the IVR based services through mobile and fixed line.

MSDG will support the delivery of both voice and data services and content in a network and device independent manner to the extent possible and feasible. It will also offer shared tools like data collection, helpdesk services, APIs, SDKs to the agencies that wish to deploy mobile applications for public services.

It will have a provision for metered access so that various agencies and partners of MSDG can account for the fee based services based upon their actual delivery.

3. Who will own the MSDG?

MSDG will be owned by DIT, Government of India, or any of its designated agencies.

4. How will MSDG account for fee-based services?

It will have a provision for metered access so that various agencies and partners of MSDG can account for the fee-based services based upon their actual delivery.

5. Who will be responsible for the notification of the standards for mobile applications?

The standards for mobile applications will be formulated and notified by the Department of Information Technology, Government of India.

(Cont'd)

6. Who will be responsible for service fulfilment?

The responsibility for service fulfilment shall lie with the respective Government Department or Agency. MSDG will only serve as the channel between the citizen and the participating Government Department or Agency.

7. Can the Participating Department have an alternate mobile initiative?

Any Government Department or Agency at the Central or State level interested in providing mobile services would be encouraged to provide its services through MSDG to avoid duplication of infrastructure.

8. What are the various delivery channels envisaged to be supported by MSDG?

MSDG shall support the following delivery channels for development and deployment of mobile-based applications for Government services. As the mobile-based technologies are constantly evolving, more channels may be added in future as the need arises.

- SMS (Short Message Service)
- IVR (Interactive Voice Response)
- WAP (Wireless Application Protocol)
- USSD (Unstructured Supplementary Service Data)
- CBC (Cell Broadcast)
- SIM Toolkit (STK)/Dynamic STK, 3G-Video
- Others (WiFi/ WLan etc.)

9. Is e-Governance a prerequisite for m-Governance?

Even though m-Governance may be seen as an extension of e-Governance services, existence of e-Governance services is not a prerequisite for deployment of m-Governance services. The mobile-based innovative public services to be deployed under the ambit of this framework and implementation strategy are aimed at extending the access of public services to those sections of the society which are unable or unwilling to access public services through internet or those which simply prefer to use mobile devices. The key objective of m-Governance initiatives in the proposed framework is to enhance the bottom-up participation and empower the disadvantaged sections of the society, thus fulfilling the mission of anywhere, anytime services as envisaged under the National e-Governance Plan (NeGP).

10. What are the steps to be followed by a Government Department to register services for m-Governance?

DIT will provide the necessary guidance and assistance to all Government Departments and Agencies to register their services for m-Governance. DIT will also provide the necessary integration support to help Government Departments adopt m-Governance for delivery of public services.

11. Who will be responsible for creation of mobile-ready content?

The concerned Departments and Ministries will be responsible for creating and updating mobile-ready content for their respective services. They may seek appropriate inputs and feedback from users.

12. What steps will DIT take to promote the m-Governance initiative?

DIT, or any of its designated agencies, will undertake awareness creation and capacity building exercises for according greater visibility to the Mobile Governance initiative amongst stakeholders and potential beneficiaries across Government, Industry, and Civil Society.