

Digital India- To Develop IT Services in Rural India

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INTRODUCTION

Today, the world has transformed from a knowledge savvy to techno knowledge savvy. Think of something and it is available in one click. So, Digital India is a step by the government to inspire and connect Indian Economy to such a knowledge savvy world. The program targets to make Government services available to people digitally and enjoy the benefit of the newest information and technological innovations.

It brings out various schemes like E-Health Digital Locker, E-Sign, E-Education etc. and nationwide scholarship portal. Digital India is a great plan but its improper implementation due to inaccessibility & inflexibility to requisite can lead to its failure. The program strives to provide equal benefit to the user and service provider. The consumers will be benefited by way of saving time, money, physical & cognitive energy spent in lengthy government processes. For e.g. digital ticketing will lead to reduction in queue at ticket counter with online resources for booking, online tax-return filing etc. The aim of Digital India to give a Unique ID and e-Pramaan based on authentic and standard based interoperable and integrated government applications and data basis.

VISION AREAS

Infrastructure as Utility to Every Citizen

- High speed internet, as a core utility, shall be made available with Public cloud sharable on private space.
- Bank account and Mobile phone would enable participation in digital and financial space at individual level.
- Smooth access to a Common Service Centre within their surroundings.
- Cradle to grave digital identity –lifelong, unique, authenticable and online.

- Secure and Safe Cyber-space in the country.

Digital Empowerment of Citizens

- Universal digital literacy.
- Transportability of all entitlements through the Cloud for individuals.
- All digital resources available universally.
- All Government certificates /documents to be available on the Cloud.
- Collaborative participative governance for digital platforms.
- Availability of digital services / resources in Indian languages.

Services and Governance on Demand

- Harmlessly integrated across departments or jurisdictions to provide easy and a single window access to all persons.
- Government services digitally transformed for improving comfort of Doing Business.
- Government ministration available in real time from online and mobile platforms.
- Every citizen entitlements to be available on the Cloud to assure easy access.
- Making financial transactions above a threshold, electronic and cashless.
- Edge of GIS for decision support systems and development.

SCOPE OF DIGITAL INDIA

To develop India for a knowledgeable future by Developing central technology for allowing revolution which Covers many departments under one umbrella programme on being transformative, that is to realize IT (Indian Talent) + IT (Information Technology) = IT (India Tomorrow). The programme weaves together a large number of thoughts and ideas into a single, extensive vision, and making the mission transformative in totality The Digital India Programme will pull together many

existing schemes which would be re-focused restructured and implemented in a synchronized manner for their transformative impact. Digital India targets to provide the much-needed sense to the following nine pillars of growth areas. Cloud computing may play a best role in the development of rural India.

CLOUD COMPUTING

What is cloud computing anyways? Cloud computing refers to the dynamic provision and use of IT hardware, software services via a network. In many cases the Internet is the network. Users no longer operate there it landscape locally; instead lease it remotely from one or more external providers. As a result, organisation of all sizes can considerably reduce IT expenditures while increasing overall flexibility. They also profit from reduced administrative overhead and enhanced mobility, and additional savings are gained from straight usage-based billing. It refers to the provision of computational resources on demand via a computer network. In the traditional model of computing, both data and software are fully contained on the user's computer; in cloud computing, the user's computers may contain almost no software or data (perhaps a minimal operating system and web browser only), serving as little more than a display terminal for processes occurring on a network of computers far away. Common shorthand for a provider's cloud computing services (or even an aggregation of all existing cloud services) is "The Cloud"

The principle behind the cloud is that any computer connected to the Internet is connected to the same pool of computing power, application, and files. Users can store and access their own personal files such as music, pictures and bookmarks or play games or use productivity applications on a remote server rather than physically carrying around storage medium such as a DVD or thumb drive. Almost all uses of the Internet maybe using a form of cloud computing though few realise it. Those who use web based email such as Gmail or Hotmail instead of receiving mail on their computer with Outlook or entourage are the most common example of such users.

To use Cloud Computing in rural area there is a requirement of given resources

- *Electricity*
- *Connectivity*
- *Equipment*

PROPOSED SYSTEM

In contrast to the previous work, solution this paper aims to provide will not move from 1 village to another. But will be available in every home. The system uses Cloud Computing to cut short all the hardware and processing equipment cost. The system will be cheap, portable and easy to use, as it will have regional languages in an interface. A voice interface can also be added for easier use.

We set up the system with the minimum equipment of hardware to run cloud compatible applications. Does user can direct interact with the cloud. They can run various application on cloud, Store their information, use it to browse internet. Computer with Pentium celeron 1.3 Ghz, and 256 MB RAM with all other components and accessories can come under 3000 INR. Hard disk is not required as whole data is stored on cloud. We make use of USB pen drive to store our primary thin OS consisting of basic programs needed to connect with the cloud. As we are using thin OS our system requirements also comes down. As processing is also getting down on cloud does less processing power is needed. Rugged chassis to withstand dusty and extreme temperature can be made. We can integrate a UPS as well as an AC/DC converter in the machine so that it can work on a car battery, to tackle the lack of electricity in many villages.

A. *Architecture*

1. *Hardware*

Hardware comprises of low cost hardware with computing power sufficient enough to run the required software. Configuration that we settled with comprises of

- Intel celeron 1.3Ghz processor
- 810 chipset motherboard
- 256 MB RAM
- Chassis(Micro-ATX) with 250 watt SMPS
- CD ROM drive(optional)
- CRT monitor(optional)

We consider CRT monitor optional because there is a cheap alternative to it. We can use video card with TV out so normal television serve the purpose of displays. We have excluded hard disc as everything will be stored on cloud.

2. *Software*

The software consists of thin OS which can be made using Linux to serve the purpose. Our OS would reside

on pen drive or flash drive, which also will provide local storage solution. Does this USB storage which comes cheap can be used to boot the system and connect it to the cloud. These days various telecom companies are providing 3G services using USB dongles for example Tata Photon Plus, BSNL 3G data card, etc. These devices come with the storage which can be used to store OS. Once the system gets connected to the cloud user can use various services provided by cloud. Users can also work on the software like word processor which run on cloud and save their data on cloud.

3. User interface

User interface is crucial as it decides the acceptance of the whole system. OS will boot and provided user with initial interface which could consists of web browser or any other application which communicates with the cloud. In the case of web browser, cloud will provide all the services in the form of web application that will be rendered by web browser. Thus, better the user interface, easier to get use to the system.

4. Examples in Play

One Good example of the cloud computing is the Google applications. Google provide building the power of application utilizing the power of cloud computing using their App engine framework. It allows all the firms to access all the services which include website hosting, email, calendar, document creation and addition and many more services. It accesses all these services directly through and Internet browser. The major advantage of using Google applications is improves the security, lower costs, productivity and data backup. The thought of the service is comes from the distributed computing, parallel processing and grid computing but all of them slightly work differently.

APPROACH AND METHODOLOGY FOR DIGITAL INDIA PROGRAMME

- It also evolves standards and policy guidelines, provide technical and handholding support, to undertake capacity building, R&D, etc.
- The existing e-Governance initiatives would be suitably revamped to align them with the principles of Digital India. Scope enhancement, Process Reengineering, use of integrated &

interoperable systems and deployment of emerging technologies like cloud & mobile would be undertaken to enhance the delivery of Government services to citizens. Success would be identified and their replication will be promoted with required customization and product correction wherever needed. E-Governance would be promoted through a centralized initiative to the extent necessary, to ensure citizen centric service orientation, interoperability of various e-Governance applications and optimal utility of ICT infrastructure/ resources, while adopting a decentralized implementation model. The state will be given freedom to develop state specific programs.

- Public Private Partnerships would be preferred wherever feasible to implement e-Governance projects with adequate management and strategic control.
- Adoption of Unique ID would be promoted to facilitate identification, authentication and delivery of benefits. Restricting of NIC would be undertaken to strengthen the IT support to all government departments.
- It creates necessary senior positions for managing the program within the department for overall aggregation, integration and is considered appropriate to implement Digital India as a program with well- defined responsibilities and roles of each agency involved. The position can be created, so that various E- Governance projects could be developed , designed and implemented faster.

CONCLUSION

Thus by using low-cost hardware, technology will be available to more and more people. Rural mass will be reaping the benefits of the IT revolution too and thus will be developing. IT for the rural India will be boon and will come with the fruits of globalisation. Our rural mass will be more educated and much more intelligent. This system can be used as a information kiosk, for primary education, and other.

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