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innovating for Digital Inclusion
ISO 9001:2008 Certified

New Delhi, INDIA

Digital Technologies in Empowerment of the Citizens

V K Bhatia
Senior Director

SEAIP
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www.medialabasia.in

India At A Glance

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India today riding on DIGITAL HIGHWAY

- Mobile Users – 1 Billion+
- 2nd largest smart phone subscription (200+ million)
- 3rd largest (Internet Users) next to China and the USA

Vast Country

- Area - 3.3 Million sq. km
- Administrative Divisions – 29 States and 7 Union Territories
- Population- 1210.19 Million (2011 Census)
- Languages – 22
- Literacy – 74.04% (2011 Census)
- 70% in Rural Population across 6 Lacs+ Villages

FULL BENEFITS OF IT REVOLUTION YET TO REACH AT MANY PLACES

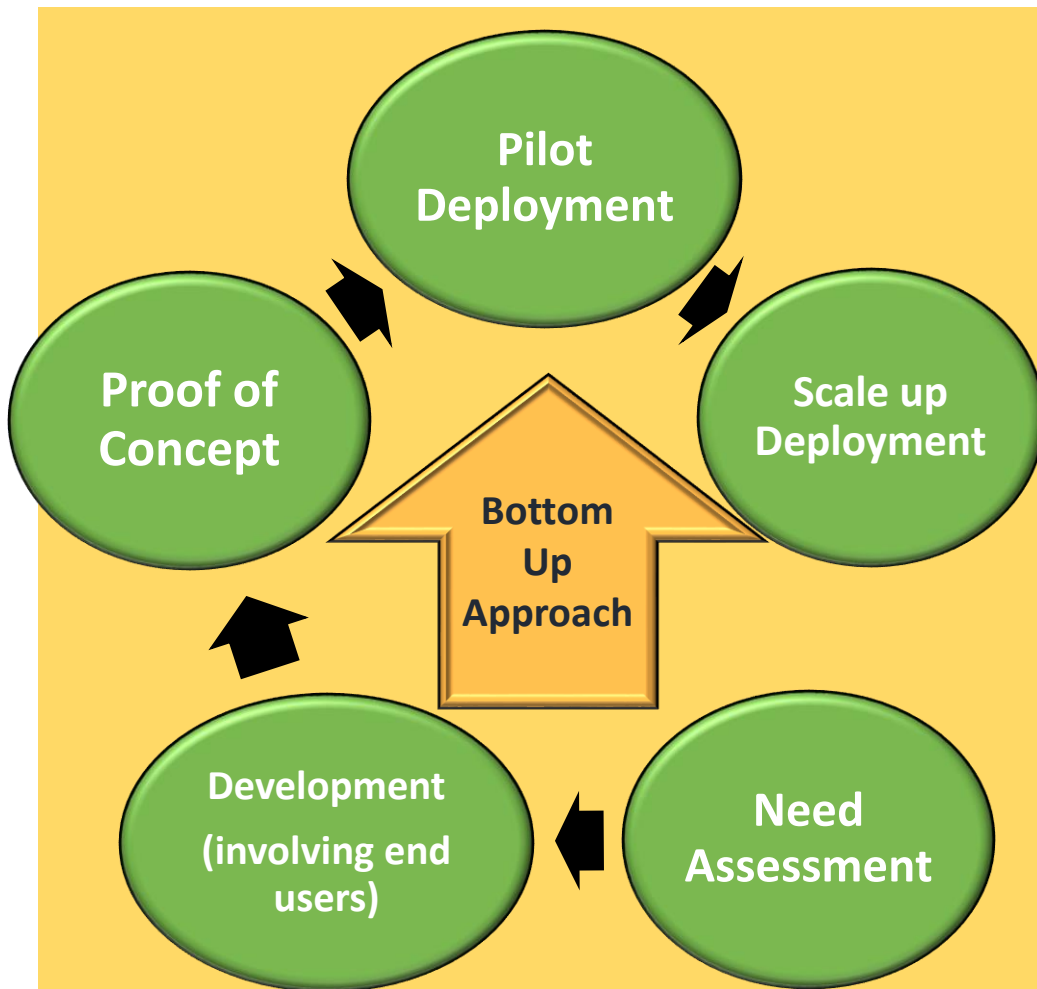**TO BRIDGE THIS DIGITAL DIVIDE BETWEEN 'HAVES' AND HAVE NOTS' – Media Lab Asia**

Media Lab Asia At A Glance

Vision:　　　　**Innovating for Digital Inclusion**

Objective:　　　**To bring benefits of ICT to the common man**

Set up as:　　　**Not for Profit Co. in 2001by MeitY, GoI**

Board　　　　　**Chaired by Hon'ble Minister for Electronics & IT**

Focus :　　　　　**Lab to Land**

Activities:　　　**Development & Deployment of ICT based applications for the benefit of common man**

Collaborations: Works with & through other organizations, Govt. Depts., Research institutions, Academic institutions, NGOs, industries …..

MLAsia Contd..

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Development & Deployment of ICT based applications for the benefit of common citizens

Pilot Deployment

Proof of Concept

Scale up Deployment

Bottom Up Approach

Development (involving end users)

Need Assessment

Application Areas

- **Livelihood Enhancement (Agriculture, Crafts, MSMEs)**
- **Healthcare**
- **Empowering PwDs**
- **Education**

Focus: Lab to Land

Strengths

- 15+ years experience:

- Need Assessment, Project design and Integration of projects

- Enhancement and Customization of projects

- Test deployment, Field demonstration and Enabling Deployment

- Transfer of Technology and Enabling/Setting up start ups

- Dissemination through web portals

- **Collaborated:** 100 + Govt, NGOs, Industry, Academia & R&D orgs

- **Demonstrated 75+ ICT ideas** / projects of relevance

- Trademarks (21), Copyright (6), Patents (9)

- Touching lives of 3+ million rural population directly and 3.5 million indirectly

Major Projects

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- **Agriculture**
  - **m4Agri - Meghalaya**
  - **AKPS – AP & Telangana**

- **Livelihood Enhancement**
  - **Chic™ CAD: Tool for Weaving & Embroidery**

- **Punarjjani™-Web tool to assess mental retardation in children**
- **Punarbhava™- Portal on disability**

Livelihood

Disability

Healthcare

Education

- **Centralized System on Heart Rate Variability Analysis**

- **Visual Speech Training System**

- **CAT in Schools**

- **Intelligent Tutorial System**

- **Comprehensive Multimedia Content – Maths & Life Science**

Interactive Information Dissemination System (IIDS)

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- **Assessment of ICT needs of farmers**
- **Push & Pull based Multimedia-Multimodel Advisory**
- **Enhances outreach of Agricultural Universities**
- **Empower Scientists to take informed decisions in delivery of personalized advisories**
- **Empower farmers by providing 'Right Information' at 'Right Time'**

AKPS: AP & Telangana
- 3,200+ villages
- 27,400+ farmers
- Language - Telugu

m4agriNEI: Meghalaya
- 400+ villages
- 11,600+ farmers
- Dialect - Khasi & Garo

Push Advisories:
SMS: 5.4+ M
Voice Calls: 0.3+ M

3 states, 24 Advisory Labs, 39,000+ Farmers, 3600+ villages (As on 30th Nov 2016)

Major Features - IIDS

- Farm profile includes 'Soil Health Card' & 'Crop History'

- Advisory in Local Language / Dialects

- Advisory Domain - Agriculture, Animal Husbandry, Fisheries .....

- 'Personal Assistance' to raise 'Multimedia Query'

- Facility to refer 'Critical Problems' to 'Crop Specialist'

- Round the Clock Query Registration through IVRS & Smart Phones

- Anywhere Anytime Access to Past Advisories

- 'Push Message' to farmers based on 'Location & Crops'

- 'Network Independent' – Accessible from All Networks

Feedback

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"**I wanted to practice artificial insemination for my pig since it is very difficult to find a boar in our locality. I made a phone call to the m4agriNEI team and got necessary advices and assistance . I am very happy with the team"**

Mrs. Maryjune Marboh,
Umtung Village, Ri-bhoi, Meghalaya

I express my gratitude to the m4agriNEI team for the advisory services being provided regarding the good planting material for ginger. I personally visited the Ginger Development Station, Umsning as per the advice given by the team.

Mr. Rojanai Nongbsap
Khapmara, Ri-Bhoi, Meghalaya

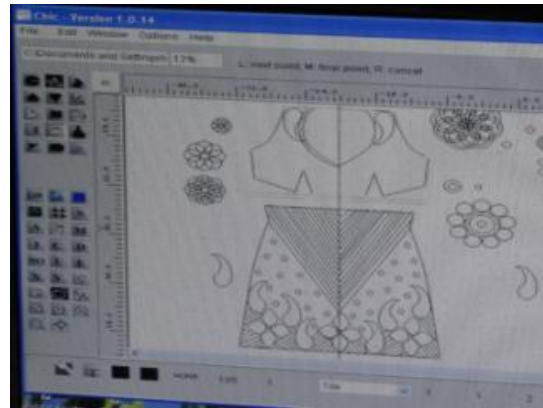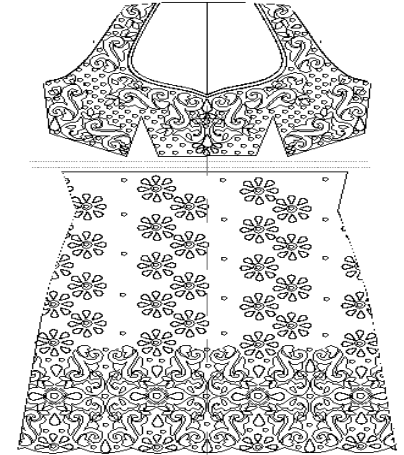# 'e-Galla' – A Retail Management System

- A low cost retail management system

- For small and medium shopkeepers

- Facilitates
  - Inventory management,
  - Billing,
  - Account management

- In turn may increase their customer base and profits

- Two different applications:
  - Stand-alone for lower mid-segment of the Indian market and can be installed on any computer / laptop.
  - Online portal 'gallaretail.com' for e-commerce

- USP: Easy to use & multilingual – English & regional languages

Embroidery Tool - Chic™ CAD

Chic™ CAD - A software tool for artisans to make 2D designs (Embroidery, Painting work etc) to improve productivity & generates employment.
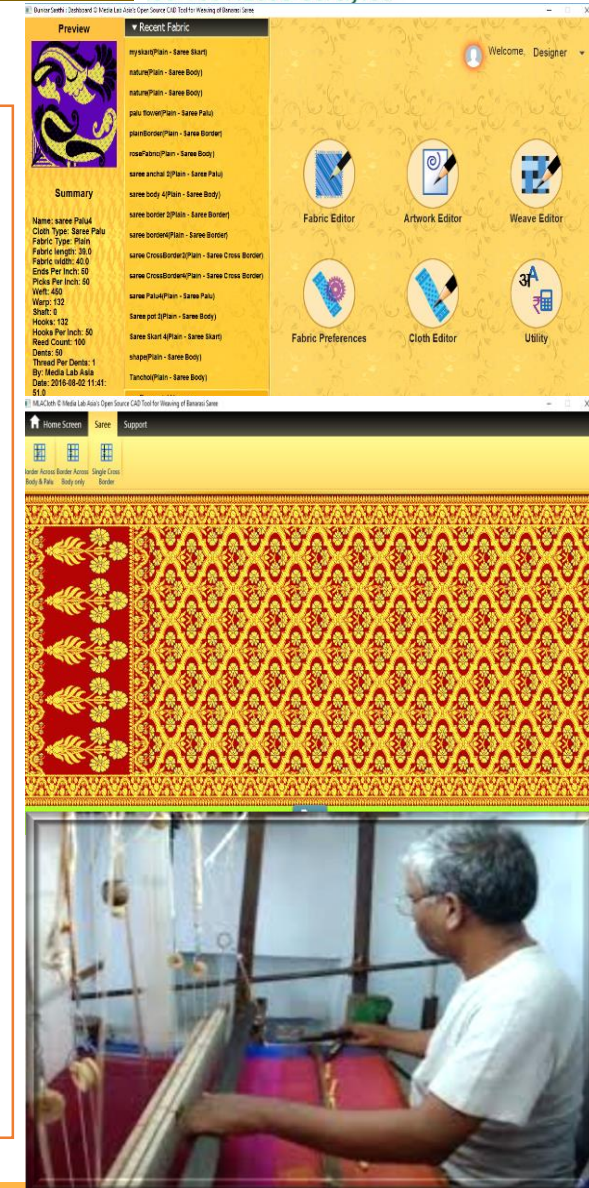
- USP:
  - Fast design turnaround time
  - Enhances productivity
  - Simple User Interface
  - Easy to learn – doesn't require expertise in computers
  - Uneducated artisans can also use the tool
  - Enables design innovation & modernization
- Beneficiaries 5000+ artisans (including 2500 women/girls)

Ongoing Development Project

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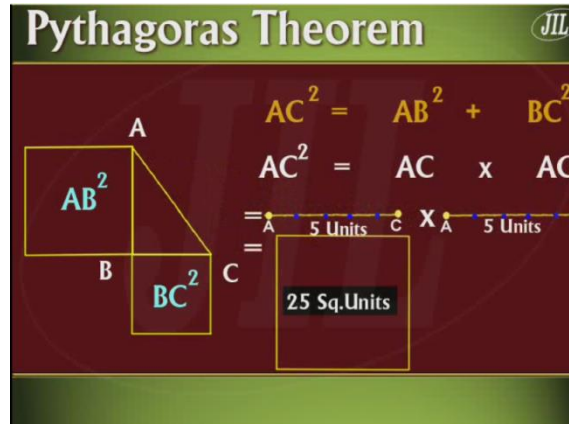innovating for Digital Inclusion
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Weaving CAD Tool for Banarasi Sarees

- Open source s/w for weaving

- Customized for Banarasi saree weaving

- Preserving ancient art forms of Varanasi

- Multi-lingual CAD (textile) tool

- Unique digital cloth concept (look & feel)

- Seamless integration of 3rd party design tools

- Pilot Testing at Varanasi with DC (Handloom), MoT

- Potential Beneficiaries: 70,000-80,000 weavers

- Training on the application and digital literacy

CAT in schools of Mizoram & Nagaland

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- Computer Aided Teaching (CAT) deployed at:

    200 schools in Mizoram, 100 schools in Nagaland

- Teachers trained:

    2389 teachers from Mizoram, 978 teachers from Nagaland

- 1567 software capsules for classes VIII to XII

- Complex Topics in Science, Geography, PCM.

- Benefitting 50,000+ students

Health Asociado™ - Mobile Based Health Management Information System

- A mobile based tool for the health workers for data collection, follow ups (reminder, alerts) and sending the data to centralized server.

- USP: An integrated system, which covers all the modules viz. demographic, family welfare, antenatal care, postnatal care, immunization & child care, communicable & non-communicable diseases, death, house details etc.

- Deployment: Deployed at 120 sub centres of 20 Primary Health Centres (PHCs)/Community Health Centres (CHCs) in Kerala.

- Beneficiaries: 0.72 Million population registered with the system
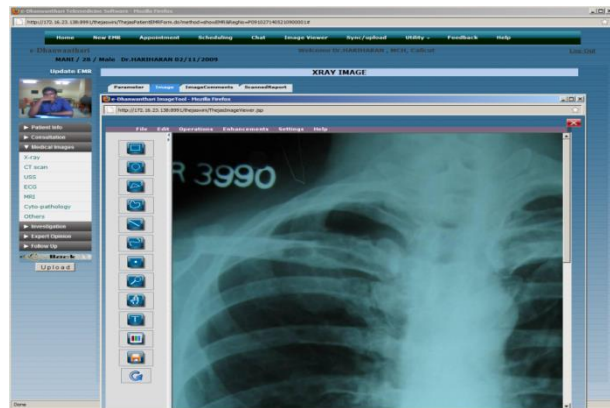

Health Survey using PDA

eDhanwanthari™ – Centralized & Distributed Rural Telemedicine System

- A resource sharing and integrated rural healthcare delivery system through telemedicine using ICT. Central server stores EMR of patients. The specialist hospitals can access these EMR and deliver expert opinion through the system.

- USP: Centralized and Distributed rural telemedicine system which can be used as a store and forward mode in the remote part of the country.

- Beneficiaries: 16,000+ rural patients benefited and accessible to 0.17 Million people.

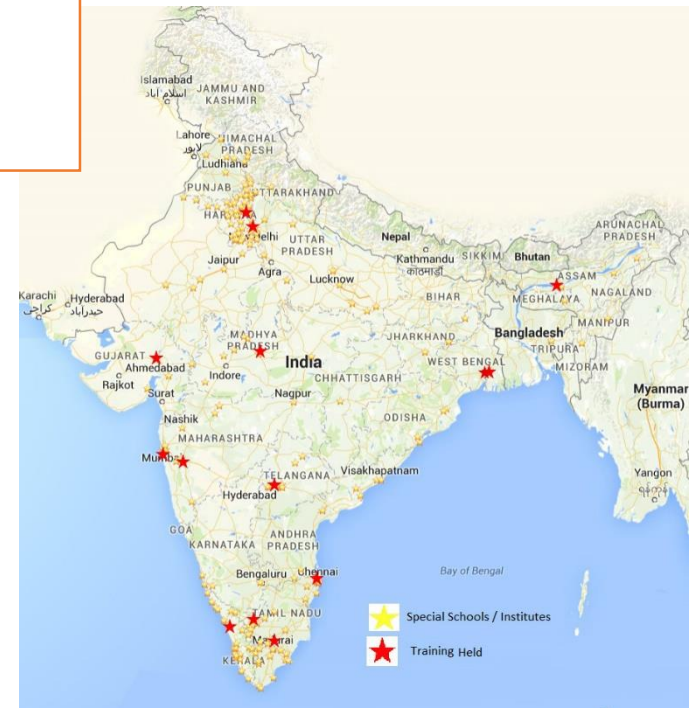**Primary Healthcare Centre**

Tertiary Hospital

mDhanwanthari™ – Cost Effective Mobile Rural Telemedicine System

- A mobile telemedicine facility (equipped with medical equipments like X-Ray, Ultrasound, Haematology Analyzer, ECG with a suitable power back-up & wireless communication system). setup at Cherthala, Alappuzha District of Kerala for early detection of TB patients; Detection and treatment of diabetes; extending specialist care to rural areas; pre and post natal care with the health awareness.

- USP: Compact Size, Connectivity, Local & Centralized EMR Storage and Digital Equipment for Diagnosis.

- Beneficiaries: 15000+ rural patient benefited during project period. Accessible to 0.44 million people of the taluk.
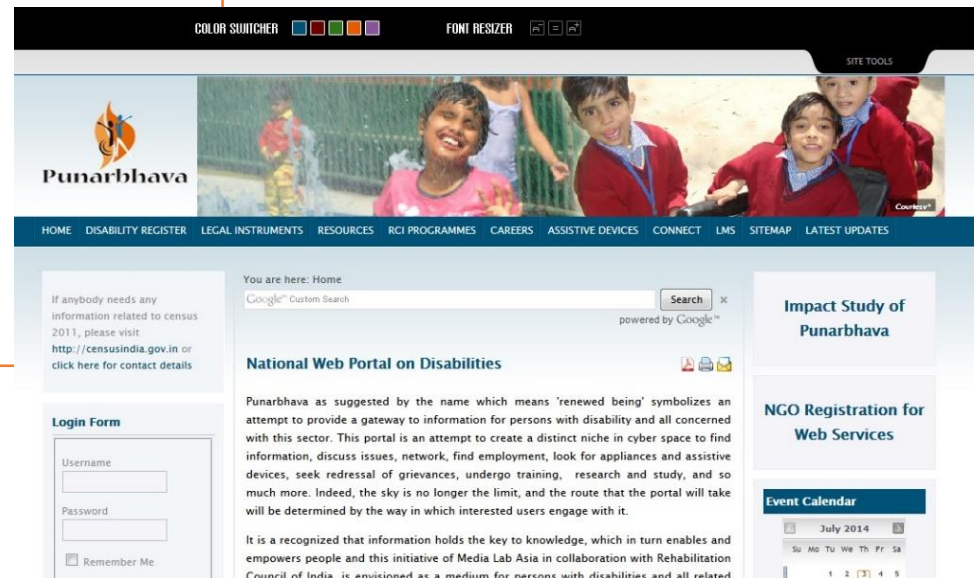
Punarjjani™ (www.punarjjani.in)

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- Web based tool to assist teachers in assessing MR children

- 3 widely used manual methods integrated

- Deployed across country including NE

- 21 training workshops conducted

- 800+ teachers trained

- Accessible to 600+ schools

- Available in English & Hindi

स्कूल प्रबंधन   प्रवेश   छात्र प्रबंधन

पास वर्डबदलें   आई ई पी   रिपोर्ट

हमारे बारे में   सहायता   लॉगआउट

Special Schools / Institutes

Training Held

Punarbhava™ (www.Punarbhava.in)

- Web portal for disseminating disability related information

- Accessible to persons with disabilities (PwDs)

- 4500+ daily hits

- Information on:
  - Disability Certificate
  - Legal Instruments
  - Resources
  - Assistive Devices
  - Career & Training
  - Rehabilitation Education Programs
  - Census & NSSO Data on Disability
  - Events, News etc.

Other Ongoing Development Projects

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Visual Speech Training Software for Hearing Impaired

- Speech Processing Engine as Back End

- Visual Feedback for Speech & Language Development

- Visualize Pronunciations: Can't be seen in Lip Movement

- Potential Beneficiaries: Persons with Hearing Impairment

- R&D jointly with IIT Bombay

Centralized Heart Rate Variability (cHRV) Analysis

- Important Human Body Performance Indicator

- Empowering Medical Community

- National Database on HRVA & Associated Health

- 600 Faculties & 2400 Researchers across country

- R&D jointly with AIIMS, Delhi

- Internal Development Project

Visvesvaraya PhD Scheme for Electronics & IT

- Scheme launched in March 2014

- Objectives
  - Enhance no. of PhDs – in ESDM* & IT/IT Enabled Services (IT/ITES)
    - 3000 PhDs in ESDM & IT/ITES sectors in 9 years
    - 1000 Full Time PhDs & 2000 Part Time PhDs

- Support 200 Young Faculty Research Fellowships in ESDM & IT/ITES

- Financial Support to academic institutions
  - Focus on select sub-areas (thrust areas) of Electronics & IT
  - Media Lab Asia implementing agency
  - Institution Supported - 96

    - * ESDM: Electronics System, Design & Manufacturing

Research Areas

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ESDM	IT	ITES
Bio Materials	Big Data	Artificial Intelligence
Biometrics	Cloud Computing	Computational Social Science
Chip Design	Cognitive Radio	
	G-PON	Computer Vision
Integrated optics	Haptics	Data Mining
	Information Security	
Large Area Electronics	Internet of Things	Energy solutions
Software Transaction Memory	Signal Processing	
	Software Defined Networking	Machine Learning
		Natural Language Processing(NLP)
	Speech Signal processing	
	Virtual Reality	
		Semantic Technology
	Wireless Communication	

Technologies Developed / Under Development: Mobile

- Smartphone system for real time bus information, remote collision detection, & accident forensics

- Automated system to sense, analyze, conserve and provide advice for home energy usage

- Smartphone accessory kit to monitor ECG and PPG

- Smartphone kit to function as LINUX PC under different configurations

- Wireless system for communication among off-shore fishing boats and with shore

- Information portal to guide fishermen offshore

- Minimal energy, directional communication from offshore boats to shore

- Smartphone based analysis of cough characteristics

- Communication, analysis and interaction system for telemedicine kiosks operated by unskilled workers

- Service to establish ad hoc communication networks at short notice in disaster-struck areas

- Intelligent, wireless sensor network based platform to manage crop resources

- System for detecting/estimating size of ground water in hard rock aquifers

- Service to forecast, analyze the effect of and manage urban floods, and to design water drainage networks

- Wireless system to sense and disseminate supply water quality/quantity information

- Service to optimally locate water recharge sites and tube wells

- System to make 7-30 day rain forecasts at agricultural field scale

Awards

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National Award

Trademarks (21), Copyright (6), Patents (9)

Whenever you are in doubt, or when the self becomes too much with you, apply the following test. Recall the face of the poorest and the weakest man [woman] whom you may have seen, and ask yourself, if the step you contemplate is going to be of any use to him [her]. Will he [she] gain anything by it? Will it restore him [her] to a control over his [her] own life and destiny?

...Then you will find your doubts and your self melt away."-

- Mahatma Gandhi

Digital inclusion is the need of the hour.

Thank You

Media Lab Asia can deliver solutions for bridging the Digital divide

www.medialabasia.in