

Block Community Portals of Community Information Centres in the North-Eastern States

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ABSTRACT

Content development is an integral part of an information system. With this objective, Community Information Centres (CICs) have been set up by the Government of India in 487 blocks of the north-eastern states. Block Community Portals (BCPs) at CICs are helping to generate content about, and relevant for, local communities to facilitate the local expression and application of information using need assessment studies and community participation. Communities are making use of this system as a means of information sharing and are thereby reaping the benefits of ICT.

Project Objectives

1. Enriching local content in the north-eastern states through the CIC network
2. Provide a platform for rural communities to access and share content and promote inter- and intra-block interaction
3. Networking the rural communities and thereby strengthening and empowering them.
4. Provide a window to global information and knowledge and market avenues

How Has the Project Succeeded in Achieving Its Objectives?

Enriching Content in the North-Eastern States through the CIC Network

Under the CICs project, 487 CICs have been set up at the block level in the eight north-eastern states, namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. CICs have been equipped with state-of-the-art communication infrastructure and two operators each. The major objectives of the CICs are to function as nodal

points for communication, information exchange, citizen-centric services, entertainment, learning and to generate content at the grass root level.

eNRICH, a community solutions framework for content management, was deployed at the CICs. Each CIC was assigned a unique URL that became the portal (<http://www.cic.nic.in>) for the block, or the BCP. A generic information categorisation plan was prepared for the block portals. The portal was populated with state- and district-specific information. The sub-categories and categories of the categorisation plan were populated with authentic and relevant URLs.

BCP is a platform for building e-communities where information is generated, stored and shared. It enables efficient interactivity within and among communities. It is a one-stop access and delivery mechanism for the community. Individual portals are managed by the CIC operators. Officers at the state, district and local domain contribute content to the block portals. The content is moderated at the state, district and block levels.

The CIC operator/CIC site manager is designated as the content manager of the block. He collects local information from BDO and other sources and adds it to the block portal. The CIC operator also entertains requests from community members as to the information needed by them, and consequently, based on this need assessment, he further adds content to the portal. Analysis of user navigation patterns gives insight into the implied needs of the community.

To enrich the content in the BCPs, a need assessment study was carried out.

Need Assessment Study

The objectives of the need assessment study were to determine the areas in which the community requires information. The study was undertaken to document the aspirations of the community, pre-empt problems by ensuring community readiness and make the project more people-oriented.

The survey method was used which involves the use of questionnaires. The questionnaire comprised a combination of open and close-ended questions related to information on various areas required by the community. It invited participation of the respondents in contributing content relevant to their domain. Target audience included various users of the CIC such as schoolteachers, principals, farmers, artisans, agriculture specialists, doctors, gram panchayat members, Block Development Officers, Self help groups, and NGOs. The questionnaire was distributed to people who visited the CIC during the survey period, and the input was supervised by the operators of the CIC.

In addition to the survey, direct interaction with a mixed group of community was also made through workshops conducted in specific blocks. Brainstorming sessions were also held with district, state and block level staff of NIC.

Block Level Need Assessment for Specific Blocks

Block level need assessment was carried out for specific blocks. The interaction with the community members revealed some interesting facts, that is, in remote blocks of Arunachal Pradesh like Mechuka, which are not accessible through roads and hence are not receiving newspapers, the need for local news and job advertisements, etc., is of foremost importance to the unemployed youth. Similarly, in a few blocks of Meghalaya, the need for market prices of agricultural commodities is of foremost importance. Attempts were made to compile this information and make it available through BCPs of these blocks.

Local Content Generation/Enrichment Using Participatory Approach

The need assessment study also aimed to identify key people who would participate in the process of building content related to their block. For example, various NGOs are interested in contributing content related to medicinal herbs and other local information. Doctors in Primary Health Centres are interested in uploading data related to their discipline. Teachers and principals are also interested in contributing data related to their school/college.

Enrichment of Content in BCPs

After the creation of 487 BCPs with the address <http://blockname.nic.in>, these are populated with the following content:

- Census information relating to the block, e.g., area, population, number of schools, colleges, hospitals, primary health centres, etc., is uploaded in each BCP.
- Information of job advertisements in the state of Arunachal Pradesh is updated continuously.
- Information on market prices of agricultural commodities available in the *mandis* of the block is updated on a day-to-day basis in the block web sites of Meghalaya.
- Information on agri-business is available at all CICs of Assam
- Health-related videos are updated on a weekly basis and are accessible through all CICs to doctors.
- Information on students and teachers in each school, the enrollment rate, pass out rate, and drop out rate are collected from schools.
- Information on unique local features, e.g., local culture, cuisine, local songs, customs, etc., are uploaded in each BCP.
- Information on indigenous biodiversity, traditional remedies and medicine, innovative and indigenous farming techniques/practices of indigenous crops, etc., are also collected from NGOs and other local organisations.

The content being generated using the BCP is continuously assessed and modified, based on the requirement of the particular block.

Provide a Platform for Rural Communities to Access and Share Content and Promote Inter- and Intra-Block Interaction

The features of BCP promote intra-community interaction by exchanging messages with other users of the portal. They can also interact with the community by sending important invitations, announcements, notices and other relevant information related to the community through the bulletin board. Local data bases related to traditional practices of the community can be uploaded for the benefit of all. This content is published on the portal after moderation by the subject specialists and in coordination with the CIC site manager.

Networking Rural Communities (Inter-Community Interaction)

The features of BCP promote networking of rural communities by inter-community interaction. Messages can be posted to all blocks of the district/state after moderation by the CIC site manager. Local data bases developed in one block can be shared across districts. Success stories or farming tips of one block can be published in other blocks. Users can directly send messages to users of different blocks of the same district/state.

Provide a Window to Global Information and Knowledge, and Market Avenues

BCPs provide access to government web sites with rich content on government services and activity; government forms, rules, procedures and notification; government tenders for employment opportunities; schemes for citizens in social sectors; job portals and education portals.

Results for an exhaustive group of school board, college and entrance examinations for educational institutions are available for immediate access as soon as they are declared. Market information, especially in the area of agriculture, is available. Job opportunities available in one area are accessible to all.

Block profile, in terms of area of the block and the number of schools, colleges and primary health centres, are available on the portal. Important tourist destinations of the block, photo gallery, road maps, etc., are also available in various blocks for the benefit of tourists.

The community members can also use the BCP as a means to showcase their local products to the world through this portal.

Can the Expertise Generated be Replicable to other Geographical Areas? How?

Based on the experience with north-eastern states, 150 BCPs have already been created and are running successfully in Jammu and Kashmir. The por-

tal has been customised based on the geographical area.

Service Orientation of the Project

NIC has developed a BCP or individual web site for each of the 487 CICs. The BCP acts as a gateway for interactive collaboration within and outside the community and enables the user to connect to knowledge sources and services tailored towards local needs. It contains information of relevance on local resources like schools and colleges, activity, infrastructure, etc. Users can barter products, debate on key issues and view information on the district and state. People can upload content on such information as local medicine, medicinal herbs, etc., as text, audio or video files.

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Quality of Service

BCP is quality tested and certified by STQC with a rating of 'Very Good'.

User convenience /Ease of access

The portal is designed as single-window interface for all the community's information. It supports multiple types of media (text, audio, etc.). No technical expertise is required to manage the portal.

Citizen-Centricity

BCP involves the local democratic participation of citizens through opinion polls at the state, district and block levels. Need assessment is carried out on a continuous basis through polls and questionnaires so as to add content relevant to the community of the block.

Reduction of Touch Points

A facility of 'Favourite folder' for registered users is available, which allows reduction of touch points by allowing users to store their frequented links in the portal.

Usage of Local Language

The adaptability of ICT, especially in developing countries like India, gets affected by several factors, including that of local needs, cultural factors and language barriers, which compounds the problem. Keeping this in mind, the BCP should be available in the local language of the state. This provision has been built into the portal. eNRICH, the content management system for the portal, is customisable in terms of local language. However, for the initial period, the content is available in English, so that it can be moderated by the NIC headquarters also. Once the content starts building in the right direction, it will be made available in the local language of the state.

Technology

Architecture

eNRICH, the software for BCPs, is designed with ASP as the front end and SQL server as the back end. The portals are generated dynamically using XML templates. The layout and colours of the portal can be changed through a simple user interface.

Modularity

BCP consists of two main modules:

- Community portal: the interface that will be used by the community members
- Desk manager: a site administration and analysis tool for managers and researchers

Multiple managers help in managing the content and communication facilities of the portal.

The state manager is a representative of the state government, and posts state-government-related information, messages, links, tender notices, etc. This posting is done once and is received by all blocks of the state.

The district manager is a representative of the district administration, and posts district-administration-related information, messages, links, tender notices, etc. The posting is done once and is received by all blocks of the district.

The block community manager (CICO) interacts with the BDO and posts block-government-related information, messages, links, tender notices, etc. This posting is displayed only in that block portal.

Moderation by domain specialists

Domain managers/specialists can provide content based on perceived/implicit/explicitly-stated needs of the community. They can be identified at the state/district/block levels.

Domain manager

- Is a person who has expertise in a particular area/domain
- Can suggest content to the CIC manager in the form of URL or documents
- Can verify the validity of the content uploaded in his domain by the community user
- Acts as a resource person

Standards

The BCPs, as a product, confirms to the following quality standards:

- ISO 12119: 1994 Information technology—Software packages—Quality requirements and testing
- ISO/IEC 9126-1: 2001 Software engineering—Product Quality—Part 1: Quality model
- ISO/IEC TR 9126-2: 2003 Software engineering—Product Quality—Part 2: External metrics

Security

The product has implemented three-layer security, namely, operating system, data base and application levels. Only the data base administrator is authorised to install software and create users with different roles. The access to the desk manager – user interface goes through user id/password with proper access rights.

Sustainability

There are three different sets of users for the application – CIC operators, government officials (district and state) and community members. Among these three, CIC operators play a major role in successful utilisation of the software. They act as an interface between the local public and the portal. As a result, the initial thrust of the training was towards the CIC operators. Training on the usage and content management of the portal have been conducted for CIC operators. The district informatics officer and state representatives were also sensitised, so that they could contribute district- and state-level information to the portal, and also help the CIC operators in case

of any problem. Training comprised theoretical and hands-on education. Regular troubleshooting is also done through video conferencing and web conferencing. Exhaustive user manuals have been provided to all users.

The system is operating on already existing hardware resources, and no additional investment in terms of human resources, etc., is required to sustain this project. The system is designed to consume minimum amount of network bandwidth and hardware space. The expertise and skill sets required to manage the application are minimum and available. It is expected that these features will ensure the self-sustainability of the project.

Cost Effectiveness

This project's main aim is to bridge the digital divide and to provide ICT access to the citizens of remote parts of India. Since this is a social development project, it is difficult to measure its impact in monetary terms. Nevertheless, this project is expected to be economically beneficial to the citizens in terms of enriching the local content of the community related to the block profile, agriculture, local data bases, tourism, etc., and by providing global information in the areas of health, employment, education, etc. For government, the cost and time saving would be in terms of the block-level information available on the internet, thereby increasing the exposure of the block to the world. Other indirect benefits are in terms of increase in tourist inflow and as a window for the rural community to showcase their products.