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## "Smart Village Controller System"

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#### **Abstract**

A Gram or rural area is a part of land area that is located outside cities, towns and forest, hilly areas, whereas the Gram community live. This research project deals with study and development of village as a smart village with interactive Gram society, the main aim to smarten the villages by offering basic facilities, education, small still growth business facility by suit Gram environment, interactive with government facilities, technical knowledge & technology review, etc. The motto of "Smart Village" will also attention to multiple challenges such as unplanned urbanization, underdevelopment of villages, migration for economic pursuance, improved standard of living, village identity(i.e. mapping location, history, moral places) and live present scenario etc. the project based on the grid interactive self-governance system, an application to solve issue and problem as a work of contribution with the technical manner and commanding chief surveillance, the village contain the body of member undertaken with sarpanch, Gram Sevak, Talathi, and police Patil, etc. the overall study case contains the all biological and physical data about village as research of permission and granted. The present research paper discusses about village development in developing world. The skill behind the concept of "Smart Village" is that the technology should acts as a means for development, enabling E-education and local market opportunities, improving health and welfare problem.

Index Terms: Keywords—smart village, rural development, villagers, Gram society, Gram rules, smart controlling, etc.

#### I. INTRODUCTION

Gram areas are also known as 'village' in India. In these villages, agriculture is the chief source of livelihood along with fishing, cottage industries, pottery, etc. According to 2011 census, rural area has population of 67.04%. In the Indian context, villages are the heart of the nation. Hence, for the overall development of the country based on village. The population of village is near about 1,000 to 3,000.We

making smart village by taking smart decisions using smart technologies and services

**Possible Contribution of the study:-** Ensuring that the village development process is widely known to all resident is a critical element in ensuring continue participation and rapid village development as given follows:

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- 1. Punsari village is also supported for their own village development. The Punsari village are organized different number of tasks for their own rural development.
- Punsari is a village located in Sabarkantha district in the state of Gujarat, India. The village is located at about 80 km from the state capital, Gandhinagar. The village follows the Panchayati raj system.

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3. The village has undergone a transformation under the panchayat. There has been use of new and advanced technology in education.

#### II. OBJECTIVES

- ➤ A 'Smart Village/Ward' encompasses sustainable and inclusive development of all sections of its Community, so.
- ➤ The 100 per cent achievement of the following basic amenities, they enjoy a high standard of living.
- Skills and Village Enterprise development with bank and market linkages gave more flexible access to youth.
- ➤ The idea of smart village in the present-day context seems more reasonable as there is a limit of growth of cities which is leading to creation of urban jungles, where the population ratio per km of land is way above the desired norms.

#### III. RELATED WORK

- 1] Shri.Anna Hazare: In 1975, Anna took different initiatives to improve social and economic condition of the village. All his initiatives were experiment based and well supported by villagers of Ralegansiddhi. Again 300 from the profit generated through the work done by community participation, the villagers were asked to contribute 25% of the money into village fund, so as to utilize it for future community projects.
- 2]David Freshwater [2000]: This paper introduced related to sustainable development is generally discussed in terms of environmental considerations, but from a rural community perspective, Sustainable development must address how the people of the community generate the income to maintain their rural lifestyle. While market signals alone can, in principle, provide the information and the conditions for this type of dynamic process, the argument of the paper is that the nature of rural areas makes it unlikely for markets alone to allow Sustainable employment.
- 3] Zhao Zhifeng [2009]: This invention represents the fast urbanization has become already a main characteristic of socio-economic transitioning China. This paper points out the characteristics and the problems of villages in Beijing metropolitan region. The paper also explores the role of villages in the metropolitan region in the process of urbanization. According to the classification guidelines, the Village System Planning intends to deal with the future of villages' development under urbanization so as to realize the sustainable development of rural areas

- 4] Dr.Milind Kulkarni [2010]: This research paper represent the India majority of the population still lives in villages. A lot of work needs to be done in making the villages clean. There are different aspects of clean village such as: water supply, sanitation, indoor air quality, solid waste management and renewable energy etc. All these aspects have different alternatives with the associated merits and demerits. In some aspects such as water supply, considerable work is done whereas in some areas like sanitation lot of work is required to be done. We can learn lot of lessons based on success and failure in adopting different alternatives. Keeping in touch with technology clean village projects should integrate technology and digital design, which will make the village not only clean but also smart. The paper discusses all these aspects with reference to Maharashtra and India. This discussion plans to give important inputs and alternatives to policy makers so that they can redirect and reformulate the policy. Engineering students can design and implement projects of clean and smart village which will help in their skill development. At the end paper gives recommendations for effective making of Clean and Smart Village.
- 5] Pallavi Tak Rai [2012]: This invention related to townships for sustainable Cities of emerging economies are their engines of growth, because if villages cater to agriculture and allied activities, then cities to the industry and service sector. The influx of FDI, expansion of markets, international assistance and aid, globalization, etc. all contribute to the rapid urbanization and simultaneously to the problems associated therewith. With the premature expansion of cities, in the absence of proper planning and preparedness, the challenges and repercussions of this haphazard growth become more evident and serious. The paper deal with the analysis of the problems associated with rapid urbanization, and seek

NAME	WORKS	YEAR
SHRI.ANNA HAZARE	<ul> <li>Indian social activist</li> <li>Contributed to the development and structuring of Marcon, States</li> </ul>	1975
DAVID FRESHWATER	Watermark     Retirement     Communities     Chairman     David Freshwater     to maintain their rural lifestyle	2000
ZHAO ZHIFENG	<ul> <li>Socio-economic transitioning China.</li> <li>The problems of villages in Beijing metropolitan region.</li> </ul>	2009

#### IV. METHODOLOGY

#### I. Method of Data Collection:-

In twenty first century, India is facing many challenges one of them is poverty and underdevelopment. A large part of India is living in villages and deprived of basic amenities of life. In the past sixty years, many schemes of development have been made for these areas but the picture has not changed as needed. Government is claiming that they have done tremendous job and reduced poverty. But real story is that poor people have been reduced in numbers on paper and ground level realities are very disturbing.

This is the first aspect. In order to develop any village that is solve the existing problem and improve the various aspect asb desired by residents- you need to know what is the actual situation in the village. The good thing is in every village to gather the basic information is sufficient to start the problem-solving planning. To start by getting the village information rapidly and collect more detailed information to construct the smart village database.

- 1.Decide how to quickly collect village information.
- 2. Quickly collect and analyze the basic information on aspect of village issues.
- 3.Develop a comprehensive list of items on which information is gathered.
- 4.Organize the system and people to collect the detailed information.
- 5.Develop a Panchayat database –a system for recording, arranging, storing & the data when required.

## II.Source of Data Collection:Importance of Data and Data Collection:

Data is one of the most important and vital aspect of any research studies. Researchers conducted in different fields of study can be different in methodology but every research is based on data which is analyzed and interpreted to get information. Data is the basic unit in statistical studies. Statistical information like census, population variables, health statistics, and road accidents records are all developed from data.

1.H. Chourabi, N. Taewoo,S. Walker,J. R. Gil-Garcia, S. Mellouli, K. Nahon, T.A. Pardo, H. J. Scholl (2012). Understanding Smart Cities: An Integrative Framework. System Science (HICSS), 2012 45th Hawaii International Conference, 4-7 Jan. 2012.

Available: http://ieeexplore.ieee.org/xpl/articleDetails.jsp.

2. M. N. Srinivas and A. M. Shah (1960). The Myth of Self-Sufficiency of the Indian Village. The Economic Weekly,13751378.

Available: http://www.epw.in/system/files/pdf/.

3.S. Daniel, M. A. Doran (2013). geoSmartCity: Geomatics Contribution to the Smart City, In: The 14th ACM Annual International Conference on Digital Government Research, Pp. 65-71.

Available: dl.acm.org/ft\_gateway.cfm?id=2479738.

#### V. SYSTEM ACHITECTURE

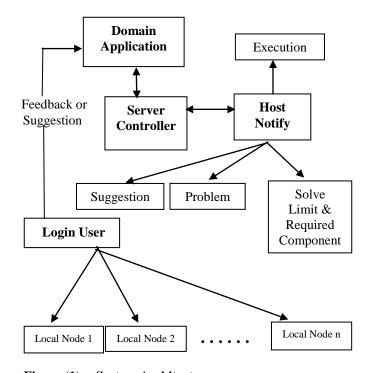


Figure (1): - System Architecture

- In fig. there are number of components of smart village controller system. There are four main components as given follows...
  - 1. System controller
  - 2. Domain application
  - 3. Login user
  - 4. Host notifies
- Whereas server controller controls the whole system. It has worked on two levels, i.e. local level and global level respectively.
- The domain application login by the user at local level, there are number of user signup as a host for an execution.

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#### VI. MODULES

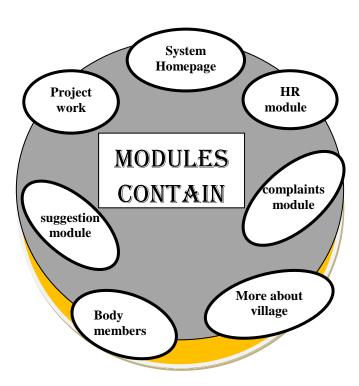


Figure (2): - system modules

There are seven modules of smart village controlling system as shown in fig. (2).

- 1. Homepage: the system web application with homepage provide the whole window of services provided by SVCS.
- 2. HR module: it is human resources module gives the services for community.
- 3. Project work: -it is module to computation of present work updating information gives to villagers.
- 4. Suggestion module: if any suggestion for village is provide by the live hood in present scenario its service provide by suggestion module.
- 5. Complaint module: with the help of complaint module any login user complaint to the responsible officer on any regarding issue in village or ward.
- 6. Body member module: gives the whole information of present body of members of village.
- 7. More about village module: it is managing the all over information of village in database.

#### VII. SERVICES PROVIDE BY SVCS

- 1. Provide interaction between villagers and government approve officers.
- 2. Gives notification of new government schemes.
- 3. Manage the database of village.
- 4. Up to date with computation present work project in village.
- 5. Solve a village regarding issues with smart profession manner.
- 6. Provide platform for Complaint and gives the news update and program result by organized by villa.

### VIII. ADVANTAGES

- In simple terms a smart village offers these benefits by making life easier for members of the community.
- That ease is provided by operating the community system efficiently including physical system as well as administration such as application for assistance.

#### IX. LIMITATIONS

- > The dwellers in the village miss the conveniences and opportunities of life in town.
- ➤ We face the different challenges to collect our information because of some dialect, some transport problem and many more thing.

#### X. CONCLUSION

There are many things to improve quality of services in village, it is need to change infrastructure, and Panchaytraj in village.

There in village lack of knowledge provided, as possible as SVCS helps to smart work in village and gives the contribution in rural development.

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#### REFERENCES

- [1] Dr. Pritesh Y Shukla "The Indian smart village: Foundation for growing India" International Journal of Applied Research 2016; 2(3): 72-74 <a href="https://www.allresearchjournal.com">www.allresearchjournal.com</a>
- [2] Swapnil B. Kale, Kiran R. Varpe, Rohit S.Chothave, Khushal S. Borse, Prof. P. H. Khairnar "THE DEVELOPMENT OF VILLAGE (Smart Sustainable Village for Community)" international journal of advance reresearch in science and engineering, vol. no. 6, issue. no. 03, march 2017, www.ijarse.com.
- [3] Mr. Milind R. Hegade, Mr. Sachin R. Kuber, Mr. Pankaj P. Sathe, Mr. Ranjit R. Mote, Mr. Rohan R. Bhosale, "Smart Village System" IJSTE International Journal of Science Technology & Engineering | Volume 3 | Issue 04 | October 2016
- [4] Kochare Akshay, Kendre Madhav, Anarse Prabhu, Bhosale Ajit, Prof. A.Tripathi, "CASE STUDY OF SMART VILLAGE AND LOCAL VILLAGE"International Research Journal of Engineering and Technology(IRJET)Vol:06Issue:05|May2019,www.irjet.net
- [5] Jadhav Aditya A,Dhavan Gaurav R, Nikole Pritesh P,Ghutukade Manisha R,Jadhav Anil B,Sherkar Vitthal A,Guide:-Prof.Bobade Shrikant S."CASE STUDY AND PLANNING OF SMART VILLAGE".ICRTESM-16,www.conferenceworld.com
- [6] Rutuja Somwanshi, Utkarsha Shindepatil, Deepali Tule, Archana Mankar, Namdev Ingle, "Study and development of village as a smart village", International Journal of Scientific & Engineering Research, Volume: 7, Issue 6, June-2016.
- [7] Veronika Zavratnik, Andrej Kos and Emilija Stojmenova Duh, "Smart Villages: Comprehensive Review of Initiatives and Practices" Sustainability 2018, 10, 2559.
- [8] Gandhi's Views & W ork f or Village Development Panchayat Raj, Harijan, 18-1-1922. http://www.gandhimanibhavan.
- [9] <a href="http://smartvillage.nic.in/">http://smartvillage.nic.in/</a>
- [10] <a href="http://en.m.wikipedia.org/hivre\_bajar">http://en.m.wikipedia.org/hivre\_bajar</a>.
- [11] http://en.m.wikipedia.org/punsari

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