DIGITAL ADDRESSING SYSTEM

Department of Post, Ministry of State(IC) of Communications

Problem Statement:- **Design and demonstrate a digital addressing system as an extension of the existing PIN code.**

Problem code: #DOP6 **College code:** 0206 GGITS

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IDEA/SOLUTION

Getting Started

Instead of using a temple, tree or street stall to locate a home or business in India, the method which is employed today what if we have a standard/formal digital addressing system? Where every property across the nation will has a unique code as its address. And this unique code will help in tracking the exact location conveniently/effectively for the service man.

Problem Explanation:-

Current Scenario: The existing limited address database has merely the physical addresses. The database lacks geo-spatial information and any standardized format addressing.

Example: When a person sends anything through the post, usually he/she has to write their whole address on which the delivery is to be made. Their address currently doesn't contain the geospatial coordinates of their place. Which somewhat makes the tracking of a particular address a little time to consume and complicated as searching has to be done by finding landmarks.

Eg:-

Name:- Ram Sharma

Address:- Hno. 216 , Subh Nagar ,
near ram mandir,
Vijay Nagar, Jabalpur (M.P)

Pincode:- 482003

Mobile no.:- (+91)- 1234569870

Expected Scenario: The Department is in the process of developing a digital address database for the entire country. The digital address may be an alpha-numeric code and shall have to be an extension of the existing PIN code system which defines the delivery jurisdiction of a post office. The structure of digital address will be like- **Digital Address :- Pin code + (Digi Code)**

EXAMPLE

Name- Ram Sharma

Phone no.:- +91-12345678

Digital Address :- **482003 + (Digi Code)**

Digi Code = Latitude + Longitude

(Bits of latitude and longitude will be compressed to make the code small)

The Solution:

The solution is to make an app from which a user can generate their digital address with the aid of geocoding technology.

- The digital address will be a number having pin code and geospatial coordinates into one.
- Geospatial coordinates in simple terms mean latitude and longitude of a place and will be able to track the exact location.
- The service man will use this digital code to track the exact location

Technologies to be used:

❖ Java:

Java is reliable, secure and constantly evolving and growing. As enrichment of Java with APIs provided by different vendors at best makes it versatile to hook it up with almost any existing native implementations.

❖ Android and Android Studio:

As Android devices today are best known for easy and responsive interface with the user. Android Studio is the official development platform for the 'Android stuff' as by Google.

❖ Data Compression:

Data compression is a reduction in the number of bits needed to represent data. Compressing data can save storage capacity and speed up file transfer.

Features :-

The app will have two options,

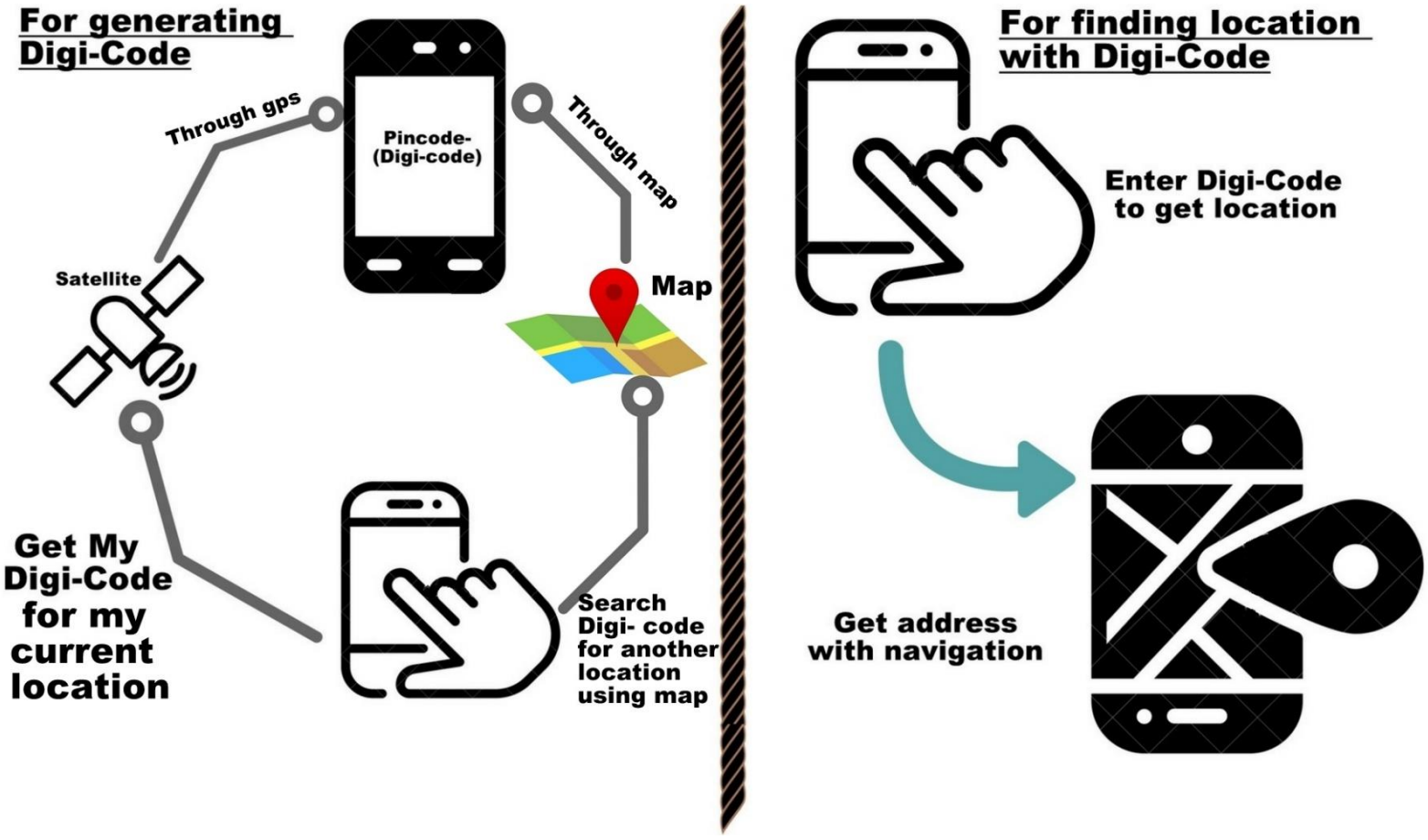
- **First option/button (For-generating Digi-Code):** will be there for the user to generate their unique digital code. By clicking on this button, a page will open where a user will enter his name, phone number, pin code. His GPS will be automatically switched on. Finally, he will get the digital code of his place.

  But, what if a person is sitting in college or office and still needs/wants to find out the digital code of some other place?

  For that another option will be provided, all he will have to do is, enter his name, phone number, address (of the specific/required location) and pin code. Then with the help of google maps he can

search for that specific location and geo-coordinates will be generated and final digital code of the required location will appear.

- **Second option/button (For finding location with Digi-Code):** will be there for the service man (delivery man) or any user who wants to find out some location and has the digital code of the required place.
  He will enter the digital code and will be able to track the exact location.



CONCLUSION :

The generation and use of this digital addressing code as a standard form of addressing has the capacity to effectively replace the old ways of addressing, in which the physical address was only used, which led to complicated/convoluted navigation instructions using landmarks.

The involvement of geo-coordinates (as an extension) in the pin code has the potential to replace the old system by helping us to find the exact location and not depend on landmarks thus saving time, ,energy and confusion.