MeraMap

Fast Track Deployment of customized OSM Tile Server

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Google Summer of Code

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Outline

1. Introduction
   - Introduction To MeraMap
   - Problem Description
   - End Users
   - Why to Build Map for own?
   - Hardware requirements
2. Working
   - Working Model
   - End User Interface
   - Sample Map
   - Customise Map
   - Development
   - OSM GSoC
3. Mappings
   - Press Coverage

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MeraMap

Introduction to Name

The Word 'Mera' belongs to Indian Languages "Hindi and Punjabi". Which means My or Mine or Our. As the name suggests Maps produced can be according to choice of single person, community or organisation.

Definition

This is a complete package which automatically installs all the components required to set up your own customised server which will update automatically with synchronise of OpenStreetMap data for an area specified by implementor with easy Installation Procedure. So it is also named as "Fast Track Deployment of Customised OSM Tile Server".

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Problem Description

Installation of OSM Tile Server has never been an easy task for anyone who wants to set the customised server to meet his own needs, and want to provide OSM Services. Although if there is anyone familiar with the installation procedure one has to go with the long installation procedure, with including a large number of packages and a lot of other dependency issues arises while installation.

End Users

Schools, Colleges, Police, Defence, Security Agencies and Companies can be the users of MeraMap. Who will be having their dedicated servers. We will also include the normal home users in our next version of software who will be able to use this with his hosting account.

Why to Build Map for own?

Why indeed

OpenStreetMap.org is already freely available on the internet. Why not just use that? You can and you should. Eventually you may come up with an idea. You might want to make the map work a little differently for you. You might want a map for a special purpose.

Example

www.opencyclemap.org OpenCycleMap is a wonderful example of what you can do with the tools and data of OpenStreetMap catalyzed by an idea.OpenCycleMap uses OpenStreetMap data, then displays it in a way that is useful to cyclists with the emphasis placed on cycle trails, bike shops and bike parking

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Advantages

Advantages of MeraMap

- Run your own Map Services.
- Enrichment of OpenStreetMap Data.
- It will attract more users and new developers towards OpenStreetMap to as a data collectors, contributors, and developers.
- Saves a lot of time, In case your previous Installation got failed the previous Installation.

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Hardware requirements

Bare minimum hardware requirements

- RAM: 1 GB
- Disk: 200 GB

Recommended minimum hardware requirements

- RAM: 4 GB
- Disk: 1 TB

Potential production hardware requirements

- RAM: 64 GB
- Disk: Many TB of 15,000 RPM RAID

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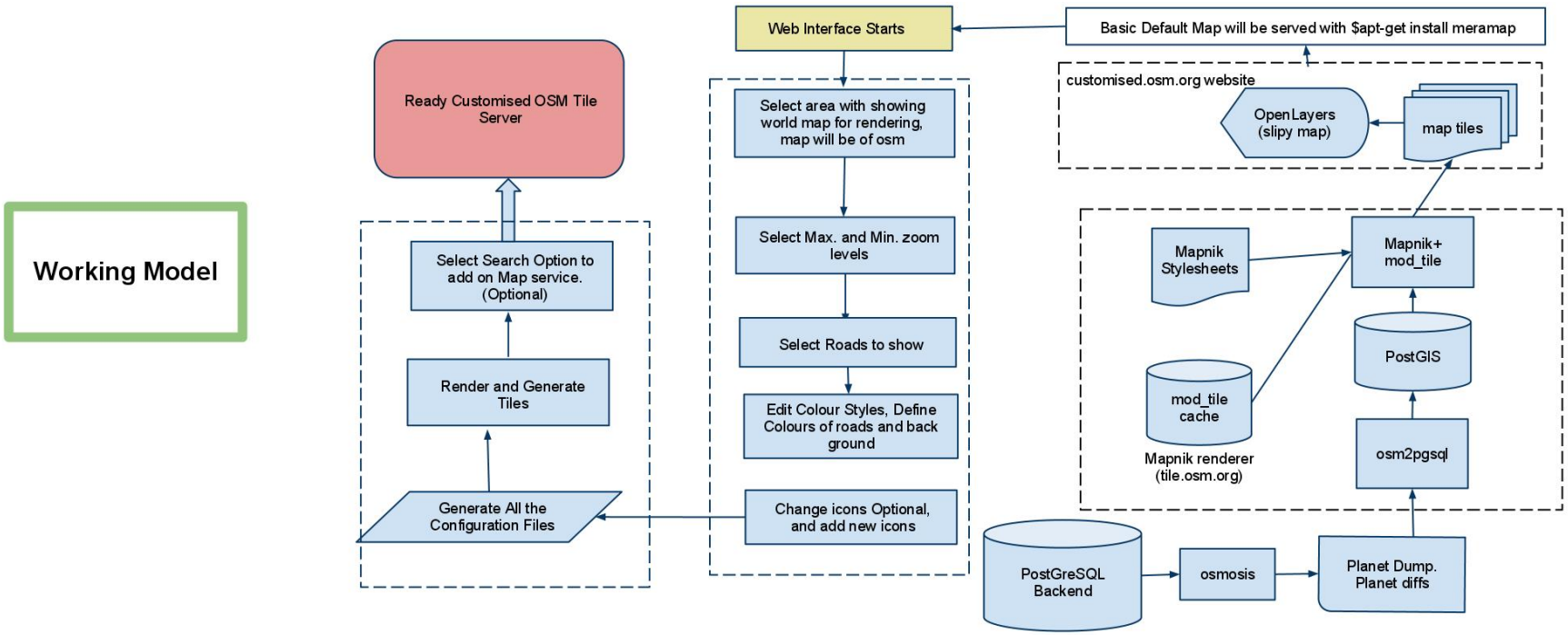
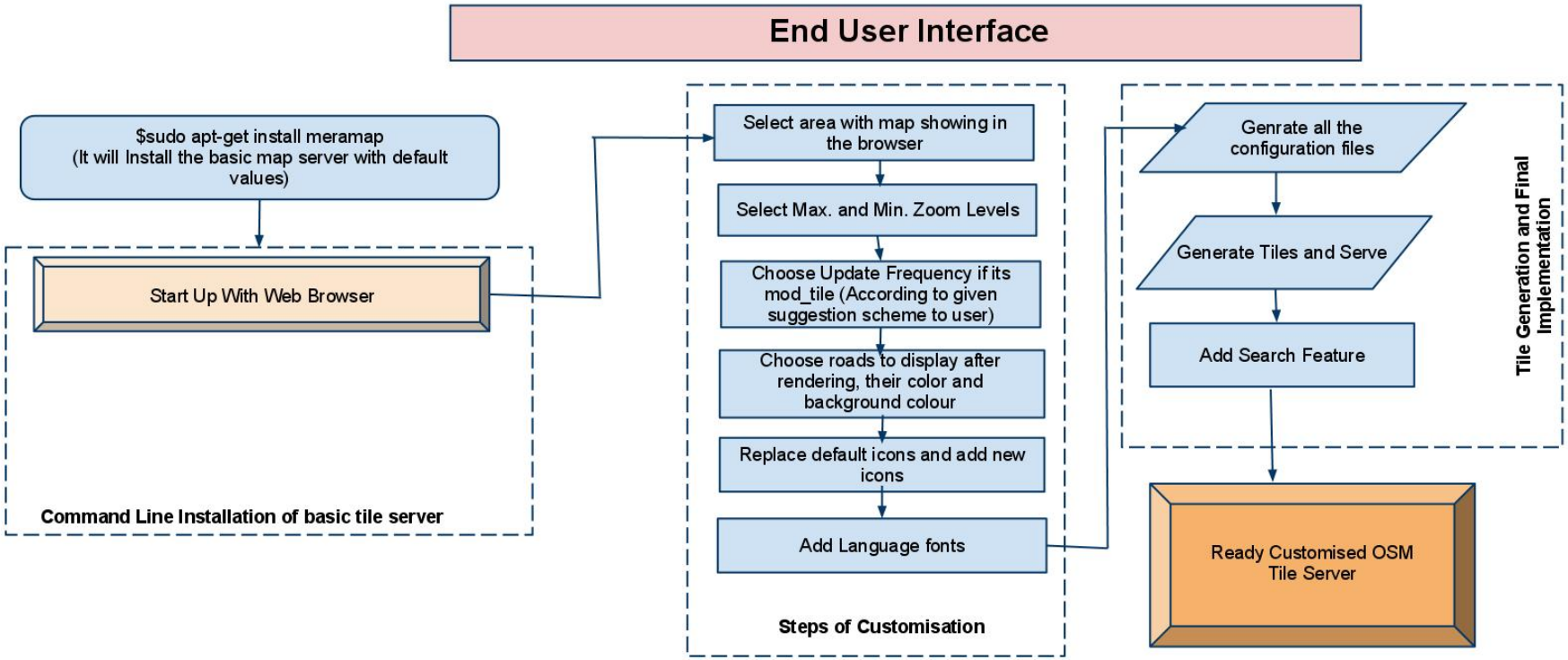
MeraMap Working Model



End User Interface



Installation

Install all the Components

Download the package.

sudo dpkg -i meramap.deb

Create your own Map

Through Web Browser, Choose your area, minumum and maximum zoom levels and click on create map then run a script in the Terminal and your Tile Server is ready.

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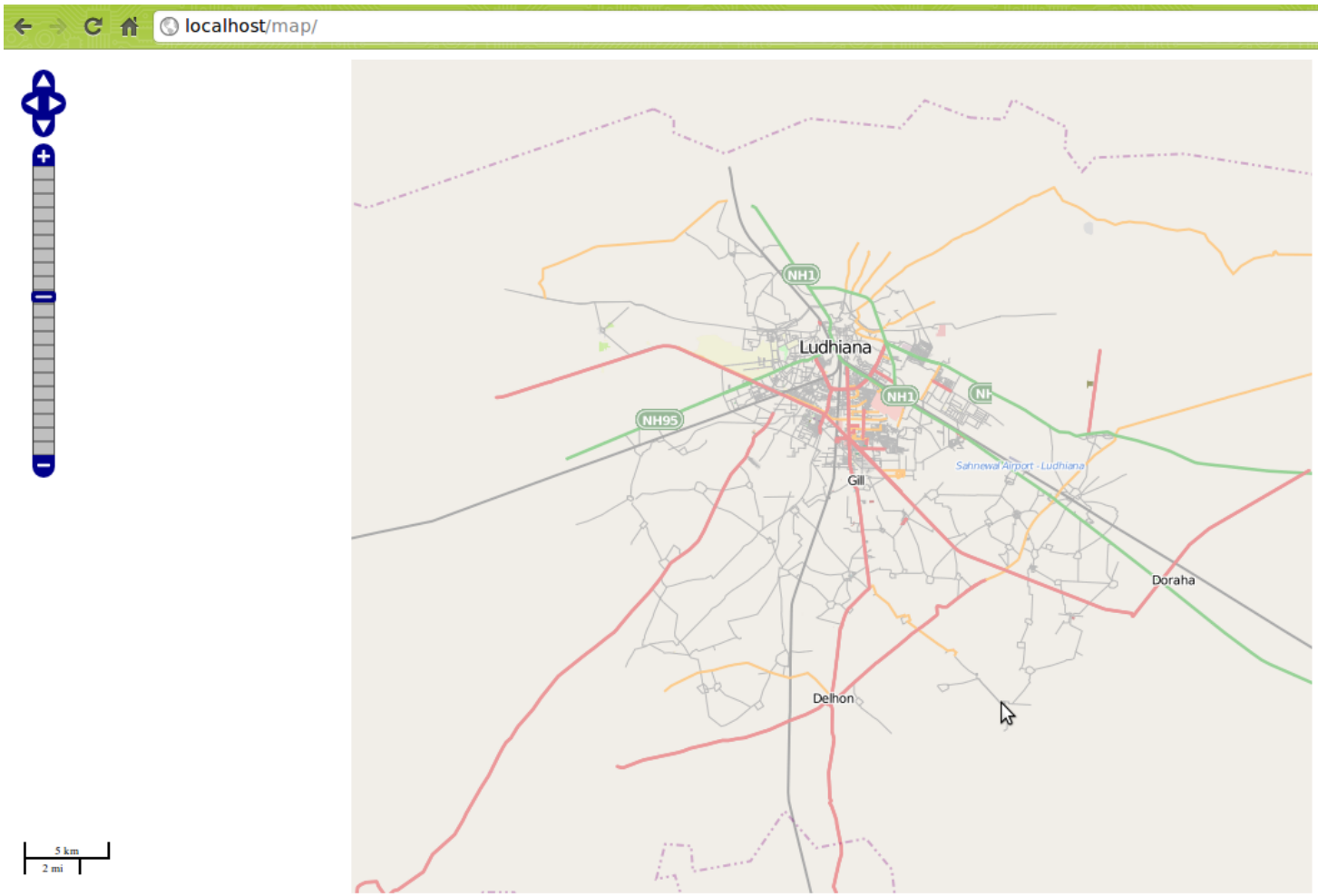
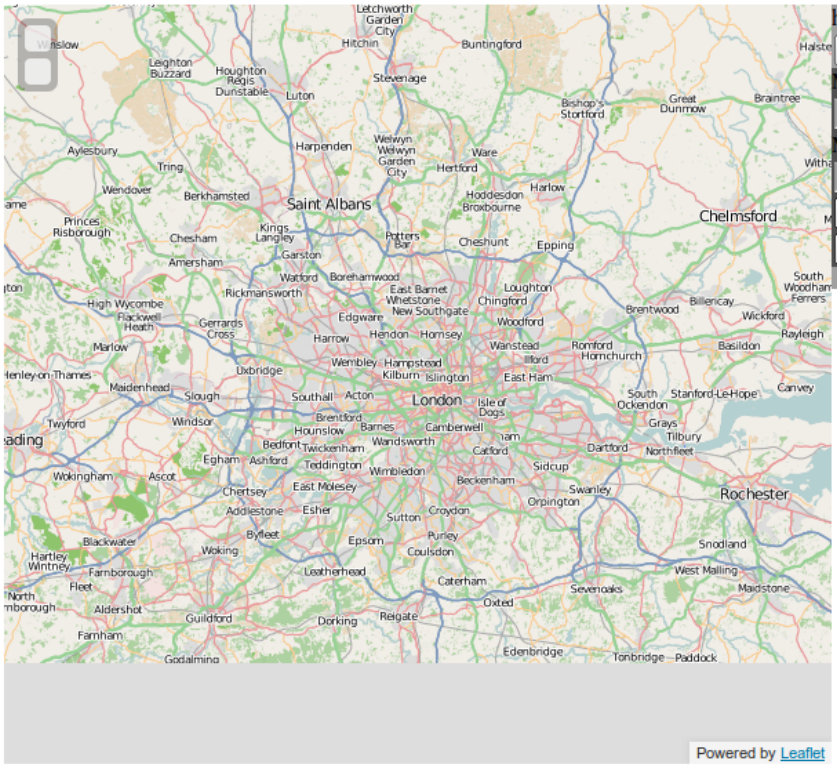

localhost/map/
Ludhiana
NH1
NH95
Gill
Doraha
Delhon
5 km
2 mi
Data CC-By-SA by OpenStreetM
Permali
75.94244, 30.741

localhost/meramap/customise_map/www/

EditMap



height: 550

+ -

Minimuim Zoom Level

6

Maximuim Zoom level

18

Select Area

Create Map

Notice :

1. Click on "Select Area" for which you want to generate the Tiles.

2. Click on the "Create Map" to render the map through Web Browser.

MeraMap.org

The code has been hosted on github. You are most welcome to take part into its development.

Git Clone

git clone git://github.com/ParveenArora/MeraMap

Thanks to OSM Community

I am grateful to the My Mentors and OSM Community for helping and guiding me all the way during project and also very thankful to SotM Organisers to make me here.

- Dr. Graham Jones, Project Mentor
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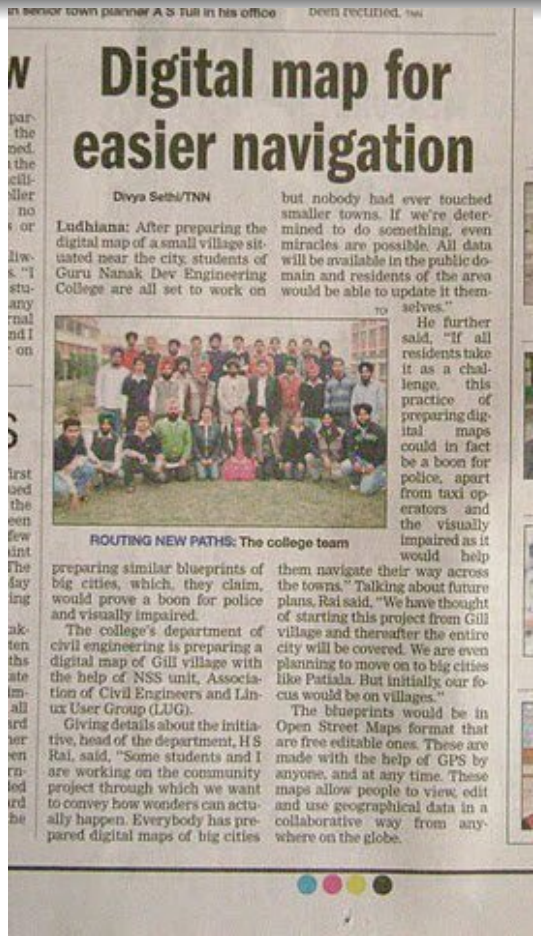


Digital map for easier navigation

Divya Sethi/TNN

Ludhiana: After preparing the digital map of a small village situated near the city, students of Guru Nanak Dev Engineering College are all set to work on preparing similar blueprints of big cities, which, they claim, would prove a boon for police and visually impaired.

The college's department of civil engineering is preparing a digital map of Gill village with the help of NSS unit, Association of Civil Engineers and Linux User Group (LUG).

Giving details about the initiative, head of the department, H S Rai, said, "Some students and I are working on the community project through which we want to convey how wonders can actually happen. Everybody has prepared digital maps of big cities but nobody had ever touched smaller towns. If we're determined to do something, even miracles are possible. All data will be available in the public domain and residents of the area would be able to update it themselves."

He further said, "If all residents take it as a challenge, this practice of preparing digital maps could in fact be a boon for police, apart from taxi operators and the visually impaired as it would help them navigate their way across the towns." Talking about future plans, Rai said, "We have thought of starting this project from Gill village and thereafter the entire city will be covered. We are even planning to move on to big cities like Patiala. But initially, our focus would be on villages."

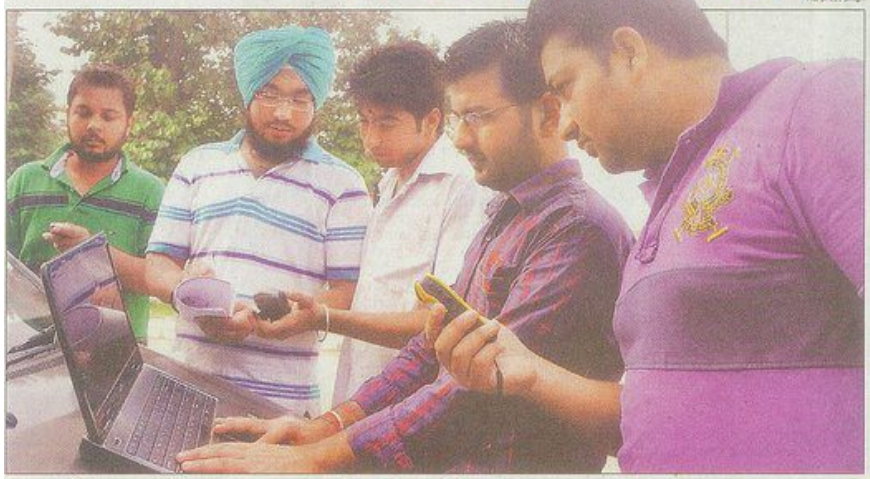
The blueprints would be in Open Street Maps format that are free editable ones. These are made with the help of GPS by anyone, and at any time. These maps allow people to view, edit and use geographical data in a collaborative way from anywhere on the globe.

ROUTING NEW PATHS: The college team

Want to visit Gill village but don't know anything about it? Or eager to know about GNE campus but have no clue from where you can get reliable information? The village mapping initiative of these five engineering students will help you know it all at a click

STUDENTS' MAPPING SUCCESS

Harpreet Singh



MAKING THINGS EASY: Students of Guru Nanak Dev Engineering College check out mapped locations on their laptop

Sandeep Dua | TNN

Students of Guru Nanak Dev Engineering College (GNDEC) have achieved the commendable feat of mapping 13 locations, including some cities and villages like Gill, which is India's first location to be mapped via the global positioning system (GPS).

Meritorious students behind this laudable effort are Praveen Kumar, Raghav Rishi Sachdeva, Davinder Kumar, Ifi Wadhwa, all 21-year-old BTech students and Guremehar Singh, 20, also a BTech student of the GNDEC. Any person can surf any location in these 13 places and the surrounding areas, which include Gill Village, GNE Campus, Shimlapuri, Dugri Fazilka, Ferozpur, Jalalbad, Ugi village, Hoshiarpur, Barnala, Chowkeiman near Sidhwan Khurd and their surroundings areas, free of cost on the website, www.openstreet.org.

TIMES YOUTH POWER

Praveen and Raghav said college dean Dr H S Rai has helped them a lot in initiating the project. These youths mapped the areas with the help of GPS and their laptop. They said they marked all landmarks in the particular areas and put them on the digital map, which makes it easier for the person to find out their location whenever they have to visit that place. Davinder and Ifi said they feel nice when people appreciate their work, which has find place in Wikipedia maps too.

> Many websites that have put up maps charge heavily from people for using it, but we don't. Many corporate groups have appreciated our efforts

The students said after the mapping work, it took them two days more to prepare the paperless digital map. They all are technocrats and proud of their unique work, as no one has ever taken this initiative.

"Some of the people who have put up maps on their sites charge heavily from people for using it, but we don't. Many of the corporates have appreciated our efforts of providing the maps free of cost," said the students.

Guremehar said if NRIs and people from other cities want to visit these places, they can easily navigate these places on the internet on hi-tech mobiles and gadgets. These youths want to prepare the digital maps for maximum number of places. "It helps to enhance our knowledge and get us some name and fame as well. Our friends' relatives always thank us for putting up these places on the digital map. They say it has made their search so convenient," said the youths beaming.

Thank You

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Presentation made with LaTeX