

**A REVOLUTIONARY APPROACH FOR PUBLIC SAFETY IN ANDHRAPRADESH 2004 ELECTIONS  
(This is not a case study)**

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This is not a case study but implemented and tested in Andhrapradesh's 2004 election.

After five decades of stamping the ballot paper and thrusting them into vintage boxes, Indians have pushed a button and decided the fortunes of many political parties and leaders in the India's parliamentary elections, and its fifth largest state Andhra Pradesh's assembly elections.

The world's largest democracy also the world's first and largest user of computerized voting machines.

Elections have lost their real meaning as far as the people and peoples' safety concerned. Nation with hundreds of thousands of villages, having the general practice of Purchase of votes through money and liquor, preventing poorer sections from voting, large scale impersonation and bogus voting, purchase of agents of opponents, threatening and forcing agents and polling personnel to allow false voting, booth-capturing and large scale rigging, bribing polling staff and police personnel to get favors and to harass opponents, use of violence and criminal gangs, stealing ballot boxes or tampering with the ballot papers, inducing or forcing voters to reveal their voting preferences, illegally entering the polling stations and controlling polling process, all these are an integral part of our electoral landscape.

In some areas, following these threats, many of those eligible to vote were reportedly too frightened to leave their homes.

Indian officials, especially Police, should take all possible steps to ensure that every effort is made to prevent such incidents are fully investigated and that perpetrators are brought to justice.

In this connection Andhra Pradesh police have put in place an unprecedented set of security arrangements including surveillance by helicopters in extremists - hit areas to ensure peaceful polling. The police had evolved a four-tier bandobust system for the elections comprising posting security personnel at polling booths, patrolling of a group of villages by mobile parties, deployment of striking and special striking forces at strategic points and supervision by senior officers.

In old fashioned bandobust system the Police have to maintain a record of all forces and their deployments etc... in a printed format and kept at District headquarters with the Superintendent of Police.

The Response time to take an action when an incident happen is half an hour or more , cause the information of mobile parties, striking forces and there location and contact numbers are in printed format and this is in a big volume.

But response time for taking an action at the field in Andhrapradesh's 2004 election is tremendously reduced to less than five minutes... how it is possible?

Yes .... in Andhrapradesh the bandobust system more are less equal like classical bandobust with other states of world's largest Democratic country ..... then what made Andhrapradesh unique in this elections ...is it a Scientific approach, an Information technology usage or a Geographical Information System.....

No..... it's the amalgamation of classical bandobust at ground and controlling of these forces through IPS officers who are highly qualified in IT with help of Scientific approach, Information technology and **Geographical Information System**.

*Keywords: Classical Bandobust, Forces, Mobile Parties, Geographical Information System.*

## **Introduction**

The Andhra Pradesh Police had to be more and more responsible for the election as both parliamentary and assembly elections were held at the same time. The arrangements for the bondobust were very important as most of the villages are extremists affected and some were sensitive and voter's safety became the important issue for them. In the traditional bondobust if any incident occurs at the time of election, to trace the location, incharge name, telephone number and to take proper action it may take around 15 to 30 minutes. By this time the incident may take its chance and there may be damage to property as well as life. To over come this traditional way of decision making to control the situation, The Andhra Pradesh Police needed a solution, that can make the situation easy to handle and take decision immediately to control the situation and before any further damage occurs to life of the voter's. This was the time when GIS came to rescue them.

### *Bondobust*

Once the base idea of the villages ( categorized on sensitivity ) have been set out, the police have to make arrangements for the bondobust. Generally bondobust is a very hectic process for the police as lot of base data has to be collected and process and then only they can take a decision on how to place different police force in the state. GIS has given them a clear view in a spatial format and which made them to clearly understand and make accurate and fast decisions.

For the election, bondobust has been made into three categories:

### *Mobile Party*

This party will be having a four wheeler and will be moving in a particular route in an area. This route will be covering around 5 to 7 polling stations. They have to reach at any incident that may take in their area ( Plate 1 ).

### *Striking Force*

Around 5 to 10 mobile parties together come under a striking force. This striking force is a static force which is placed in any of the area within their mobile party routes, so that they are easily accessible to all the mobile parties. They are mainly called when the situation cannot be controlled by a

single mobile party. Striking force will be having information of all the mobile parties, their route, the Incharge name, his mobile phone number and the force strength ( plate 2 ).

### *Special Striking Force*

A group of around 3 to 4 striking forces come under a Special Striking Force. They will be having a greater number of force strength. They are mostly used when any major incident occurs in their area ( Plate 3 ).

## **Methodology**

To create the maps and the database which will be suited for the purpose for the Andhra Pradesh Police a little be different methodology was applied than the usual one.

Different thematic layers that have been generated for this purpose are :

### *State Boundary*

State boundary plays a major role as the bondobust at the state border is of atmost importance. From the View of police a lot care has to be taken at these places. GIS Maps made them the task very easy for discussion making for planning of bondobust at major and important place along the border.

### *District Boundary*

There are totally 23 districts in Andhra Pradesh. Each district has be generated individually for which contains all the details. From parliamentary, assembly, Mandal and village information. Here the district Superintendent of Police of has taken the full charge. ( Plate 4 )

### *Parliament Boundary*

Totally there are 42 parliaments in this state. The elections are conducted in two phases, so the state has been divided in to two phases of 21 parliaments. This has been shown in the map which has given the police a clear idea for there planning. There was a spill of three assembly areas of first phase district into second phase. ( Plate 5 )

### *Assembly Boundary*

A total of 294 assembly seats are presented in Andhra Pradesh state. In district wise information assembly wise maps have been superimposed so as to find out the neighboring districts and plan for a perfect bondobust.

### *Mandal and Village Boundary*

Mandal and village boundary maps have also been generated at district level. More than Mandal village map plays an important role as the placement of the booths as based on population of the village.

### *Road Network*

Road network for the entire state has been given, till the cart track level. This will help in preparing for the way the bondobust or the police has to move from one place to other.

### *Habitat Information*

This has a key role the whole project as this gives the information of the village and its location. It helps in giving the entire information of the location from its village to state level.

### *Helipad Information*

Areas which are inaccessible or which are highly extremist affected areas have been given the facility of helicopters. These are used to carry the EVMs from the polling stations after the elections have been completed ( Plate 6 ).

### *Database Information*

All the database information is stored in oracle database. This information consists of all the details related to police bondobust, village information, police station limits information, pre and post incidents of previous elections. This database has to be linked to spatial data created in GIS.

### **Work process**

GIS which plays a key role in the bondobust of elections are mainly generated on the bases of sensitivity of the village. According to the police a village is identified by its sensitivity. The classification of a village based on its sensitivity are :

- Extremist Affected
- Hyper Sensitive
- Sensitive
- Troublesome
- Inaccessible
- Normal

Based on these layers the village has been identified and displayed on the map. Each category has been displayed in different colours to make them to understand for the police. ( plate 7 )

The information that has been displayed in the maps were of districts, parliaments, assembly, first phase and second phase, spill over assembly, village, polling stations ( plate 8 ), mobile party routes, striking force, special striking force, helipad, village sensitivity information, pre and post poll incidents and there location, and shortest route between two places.

Finding the shortest route is a different module that has been used here to find out the shortest distance between two locations. This not only shows the way in the spatial format but also gives the direction how to proceed to the target. The different villages that come in the way, polling stations, the direction, weather it's a highway, district road or a cart-track, and the distance to the target and between each stop. Because of this it will be easy for the police force to get to the incident much faster, saving a lot of time and even handling the situation on time. most of the force that will be deployed at the time of

# Map Asia 2004

Beijing, China

election bondobust is not from the state, or more precisely to say not form the place where they have to work. So they may not know the places very well to go on their own. At this moment the shortest route map will help them very much in reaching the target without the help of other persons.

## Results and Discussion

Once the software was ready for the use it was a greater relief for the Andhra Pradesh Police, but a point of doubt whether this software will be up to the expectations they have made. But Geographical Information System had made their doubt clear. The maps which were generated were showing the database information in spatial format, which they were seeing all these years in a text format. These maps gave them a spatial view of the entire area which made them easy to understand and to give accurate decisions in planning and deploying the force for election bondobust.

The map showed them the districts that come in the two Phases and the spillovers. The maps then displayed the polling station information, like the polling station location, its number, Incharge name, telephone number, whether its armed or not, the force strength, number of voters who will cast their vote in the station. So sitting at one place, may be at district head quarters viewing the districts information or at the capital viewing the whole state at a time, they got the information at a click of the mouse.

The Andhra Pradesh Police were keen on knowing how their force information will be displayed. It came to a mere shock to them by seeing the entire information of the state right in front of them. They could see the mobile party information. The Incharge name, telephone number ( land line ), mobile number, the polling stations it will be covering, the force strength it has, it also has the information of to which striking and special striking force it belongs to. More than this they could see the route in which the mobile party would travel at the time of election and also see the polling station they cover.

When ever an incident took place within no time the information regarding the incident has been traced, the village and the polling station, in the map and they could find out who is the Incharge person to be contacted. If the incident is a major one and the force is not sufficient with the mobile party the Superintendent of Police has found out who is the nearest mobile party or the striking or the special striking force from that incident that can reach the place faster and ordered them to take control over the situation. This has been done through the module of finding the shortest route. It has also given them the information regarding the nearest force which is present around the incident place, along with the distance ( Plate 9 ). To handle all this and to take decision they were surprised to see that they did not even take five minutes and the situation has been taken into control before any further damage was caused to the life or property.

Andhra Pradesh Police was much satisfied in using the software which made them to control incidents which have been decreased to nearly fifty percent when compared to previous elections. More than in the first phase they have used this extensively in the second phase, which has given them a good result in controlling the situation and protecting and giving a lot of safety for the voters.

Looking back to the previous elections The Andhra Pradesh Police has shown a great relief and satisfaction in giving more safety to the voter's. They have very well controlled the situation by themselves, but by identifying the incident place and making decisions very fast, much lesser time than they were taking in the traditional way, and controlling the situation on time definitely they pointed out to **Geographical Information System**.

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## **Conclusion**

GIS has made it possible to overcome the problems faced in the traditional bondobust. It has reduced the time in searching a location and finding out the information drastically from 15 to 30 minutes to hardly 5 minutes or less than that. The decision making has become very fast and the situations have been controlled on time, not making a lot of damage to the life of voters or the property of election. Andhra Pradesh Police, who were in need of a solution for ensuring voter's safety in the election bondobust, made it successful by using the facilities of **Geographical Information System**.

Note : The maps shown here are of only one district - Nalgonda district.

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