



# **Position Paper on Mobile National Family Locator and People Monitoring (NFLPM) integrated with 100 Police as an essential Government To Citizen (G2C) Service for Safe India**

## **Background**

1. There is no end to mobile revolution in the world. There are more mobile phones than people in the world. A mobile in the hands of people has unlimited value for country's economic growth and excellence in governance.
2. The instant knowledge of real time and accurate location of a mobile apart from opening up many commercial applications has made the possibility of its very fruitful utilization for National Security and Public Safety (NSPS). When this real time and accurate location is made available to the family members, relatives and friends of a person in distress, there is a very good chance that some near and dear family member or friend would be able to extend possible assistance to the victim needing rescue and relief from an intended crime either being planned or even being committed by the criminals. As a parallel, if this location is also made available to 100 police instantaneously, the victim can hope that the Law Enforcement Agencies (LEAs) would quickly marry up with the family and/or friend(s) at the scene of the crime sooner than later and together they would rescue the person. Such a scenario gives huge safety and security comfort to the citizens as they know that in the event of unfortunate situations, they can expect both their family member(s) and/or friend(s) together with the LEAs to come to their help.
3. A mobile National Family Locator and People Monitoring (NFLPM) integrated with 100 police when provided as an essential G2C service has the greatest potential of making India a safe country. For the purpose of understanding such a service, it would be called as NFLPM.

## **Power of NFLPM**

4. NFLPM is awesome for family safety and security involving women, children, elderly persons and spouses. Whether the person is traveling or not, the sense of safety and security provided by NFLPM is highly comforting. Some illustrative scenarios are enumerated below :-

- (a) The victim can press a button on the mobile and send an alert in less than two minutes along with the location to family, relatives, friends and police asking for help.
- (b) If not in a position to press any button on the mobile, the victim can press a key on the wearable wrist band to achieve the same results or even shake the mobile vigorously for the needful.
- (c) The person can schedule alerts to the family and/or friend(s) notifying his/her arrival at designated locations like reaching school, office, market, home, tuition center etc.
- (d) Family and/or friend(s) can also seek location of the person on demand just in case the person has forgotten to schedule the alerts.
- (e) In case of an untoward incident, family and/or friend(s) can also dial 100 police and lodge an instant phone FIR giving location and authorization to police to track the victim basically to reach the location in the honking, blaring and speeding PCR vans ordered to be moved from the nearest police booth/post/station.
- (f) In such a scenario, the victim instantly gets the much needed physical support of the family and/or friend(s) and the police together, making the rescue efforts most productive and positive results oriented.
- (g) The person can be anywhere, so long as there is a mobile network, the real time and accurate location of the victim plays a very big role in the rescue operation giving much longer reaction time to the entire search and rescue efforts launched together by the family and police.
- (h) The unlimited power of NFLPM has motivated the Ministry of Woman and Child Development (MWCD) as also the Ministry of Home Affairs (MHA) to consider NFLPM as a nationwide solution for family safety and security.**

## Implementation of NFLPM

### 5. Mobile Operators.

- (a) BSNL is chosen as an anchor operator to lead the NFLPM. BSNL uses its own Location Determination Infrastructure (LDI) like GMLC and SMLC and interconnects with networks of all other operators. For location, BSNL thus is the interconnection seeker and other operators are interconnection providers.
- (b) BSNL seeks essential subscriber and network data from all other operators and then meets all the location requests from provisioning to delivery.

- (c) The billing is done by respective operators based upon the common NFLPM subscriber data maintained and updated by the NFLPM providers on behalf of BSNL.
6. **LEAs.** Police sets up Mobile Location Monitoring Center (MLMC) of Micro, Small, Medium and Large (MSML) size at each level of its operation like police station, district, zone, state and national levels.
  7. **NFLPM Providers.** Two NFLPM providers are selected through global tendering process just like MNP operators, one for North and East and the other for South and West.
  8. **IVR Providers.** Two IVR providers are selected to integrate NFLPM with 100 police IVR.
  9. **Project Management.** TCIL is mandated with resources, funds and powers to be the prime contractor to deliver NFLPM.
  10. **NFLPM Architecture.** NFLPM architecture as a unique innovation to locate any mobile operating on the network of any mobile operator anywhere in the country is also shown as a diagram.
  11. **Implementation Approach through Pilot Projects.**
    - (a) Two pilot NFLPM projects in parallel are executed, one in a metro and the other in a large district of a big state in about six months time.
    - (b) Once, the pilot projects are successful, NFLPM is replicated throughout the nation in about 18 months.
  12. **Operations and Maintenance (O&M).** After the complete project delivery of NFLPM, BSNL manages the operations of NFLPM as an essential G2C service.

## Economics

### 13. Cost.

- (a) BSNL incurs incremental cost to beef up its LDI as also builds up a cloud from its own budget. It may not be more than 100 Cr

- (b) Operators are basically interconnection providers and thus their cost is minimal and is to be met out of their own budget.
- (c) Police establishes MSML size MLMCs @ 40,000 for micro size at a police station, 60,000 for small size at each district, 80,000 for medium size at each zone and 100,000 for large size at a state. This is not more than 100 Cr and comes from the police budget.
- (d) NFLPM providers bring their product, install, integrate, test and commission in the cloud and interconnection. One time cost involved in this is paid out of BSNL capex of 100 Cr.
- (e) IVR providers bring their product and install, integrate, test and commission in the police cloud for 100 service. One time cost for this is paid out of police capex of 100 Cr
- (f) TCIL does the project management @ 15 % of capex making it to be 30 Cr

#### 14. Revenue.

- (a) NFLPM is an essential G2C service and there is very nominal charge of 50/- per family per month for smart phone and 30/- per family per month for feature phone levied by the government.
- (b) Assuming that 20 % families (50 million) subscribe to NFLPM, BSNL collects 160 Cr per month.
- (c) NFLPM is an essential G2C service, therefore, revenue from this service is not counted towards Adjusted Gross Revenue (AGR) of mobile operators.**
- (d) Revenue share is worked out as follows :-
  - a. 2\* IVR providers – 5% each
  - b. 2\*NFLPM providers – 10 % each
  - c. BSNL for O&M – 10 %
  - d. BSNL and all operators - 60 % on prorata as per active subs availing of NFLPM as a G2C service

#### Some other use cases of NFLPM as a G2C Service

- 15. Many young boys/girls and women from tribal areas of almost all states are brought to towns and cities with the promise of jobs. Even if state provides them mobile phones, their mobile location can help the family and/or friend(s) and the police to track and rescue them from the clutches of the criminals.

16. Search and rescue in case of any disaster situation like Uttarakhand tragedy, storms, floods, earthquake etc.
17. Search and rescue in case of terrorist attacks.
18. Riots control in case of any communal violence like Muzzafarnagar riots.
19. Enforcement Directorate (ED) and other state agencies charged with investigation of bribe and corruption cases.

**How NFLPM could have prevented some heinous crimes against women, helped in Uttarakhand rescue, minimized deaths in Muzzafarnagar riots and would drastically reduce the exploitation of tribal girls**

20. **Nirbhaya Rape and Murder in Delhi on 16 Dec 2012.** The culprits took nearly two and a half hours inside the bus to commit this unparalleled rape and murder. NFLPM would have sent real time accurate location alerts to her father and friends on their mobiles, like, Nirbhaya at 6.30 pm at Munirka Bus Stop accuracy 70 meters, at 6.45 pm near Vasant Vihar Bus Stop accuracy 50 meters, at 7 pm at Shankar Vihar accuracy 20 meters and so on. Father would have rung up 100 and lodged an instant phone FIR, authorized the police to track Nirbhaya and would have left his home along with his son for the last location known of Nirbhaya. Police would have sent 2-3 PCRs honking, blaring and speeding towards the last location known. Police would also have erected two barriers on the outer ring road. Loud blaring of police sirens would have made the six accused jittery, they would have abandoned the bus and run away only to be caught the same night. Quite possible that Nirbhaya would have been alive today.
21. **Rape and Murder of Software Techie in Mumbai on 05/06 Jan 2014.** The hapless girl detained at Lokmanya Tilak Terminus at 5 am and went missing thereafter. NFLPM would have sent her location alerts to her father and friends. Father would have dialed 100 and lodged instant phone police FIR and authorized the police to track the girl. Police in 2-3 PCRs honking, blaring and speeding in the area of last location known of her mobile in early morning hours would have scared the criminals who would probably have left her and fled only to be caught the same day.
22. **Gang Rape of Danish Tourist in Delhi on 14 Jan 2014.** The criminals took nearly three hours to commit the gang rape. One key press would have sent alerts to police who would have surrounded the last location with 2-



3 PCRs coming from 500 meters away from the location honking, blaring and speeding. All goons would have been caught while they were in the act itself.

23. **Uttarakhand Rescue.** NFLPM would have sent alerts to the family and friends of the pilgrims stranded with their last location. The family members would have joined the search and rescue operations forces around the last location known and with clear focus on the area of search; it is quite possible that some of the pilgrims could have been saved. The state government would have known exactly how many pilgrims entered the state for charon dham yatra and how many could not return by searching the NFLPM data base of all those mobiles which entered the area and those which stopped making calls were the unfortunate ones. The state government would have clarified from the relatives of those unfortunate ones whose mobiles had stopped making calls. India would have been saved from yet another international shame that look at the governance, the nation does not even know as to how many of its citizens got washed out in the tragedy, as on 02 and 03 Sep 2013 after about 2.5 months of the tragedy, 120 bodies were discovered who died because of starvation. No one knows the whereabouts of those unfortunate missing pilgrims. NFLPM would have minimized the uncertainty in the number of pilgrims who have gone missing.
24. **Muzzafarnagar Riots.** NFLPM would have given the alerts of miscreants in groups who were hounding their victims under the curfew hours and police would have reached the location in PCRs honking, blaring and speeding. Some deaths would have been prevented.
25. **Tribal Girls Exploitation.** Many tribal girls are brought to towns with the promise of jobs only to be subjected to crimes against them. Many of them go missing. If these girls are provided mobiles by the state, their location would be known to their parents and friends who can easily alert the police. Police is well integrated into NFLPM and can never derelict, will always have to reach the location in their PCRs and 70 % criminals will leave their victims and run away only to be caught on the same day.



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## NFLPM Architecture as a Unique Innovation to Locate any Mobile on any Network in the Country (Refers to Para 10)

