

PUDUCHERRY POLICE

Police Central Control Room Emergency Response Support Centre (ERSS @ CCR)

Introduction:

"Emergency Response Support System" (ERSS) is the "Single Emergency Contact" as Dial 112 (Call Centre Application) a MMP of Women Safety Division of MHA.

As directed by the Supreme Court, the WSD, MHA is focussing this Mission Mode Project as Police Control Room based "Single Emergency Contact @ ERSS" Dial 112 incorporated with "Emergency Calls / SMS / SOS / Email" to support the Emergency support to Women in distress and etc. C-DAC has configured system application in a very excellent way and it is good going through all Police Control Rooms in India with scheduled integration of all "Toll Free and Disaster management".

The direct or indirect Vision & Mission of Women Safety Division of MHA, GoI as per the directives of Supreme Court is Public Protection & Disaster Relief relies on Police Control Room

Professional Policing: Wireless Communication:

Policing the society is a "Professional Tactful Concept" requiring "High Level tactfulness in dealing with citizens with distress or conducting various agitations or various disasters. Immediate connectivity from field to Senior Officers and Administration is the must in the Democratic Country like India.

- In this regard, Professional Policing is focused on "mass media wireless communication" through which all officers can listen to a specific message and react accordingly to suit the requirements time to time.
- It is "Police Functioning is fully relying on Wireless (VHF), a repeater based wireless communication connectivity between every officer. They provided with Wireless Set (Static in Office & Vehicles) and Handheld (Walkie-talkies) with beat Officers.
- It became the primary factor that Police routine communication is relied on VHF Wireless as its Mass Media Emergency Communication reaching all field officers and other users assigned within the "Grouped Channel".

DIETY & DCPW: Communication Technology

Vision & Mission of MEITY & DCPW is to establishing dedicated Broadband & Internet / Intranet connectivity to all Offices / Officers under PAN India digital highway focussing on the mission to integrate the fast-growing technology communication technologies for the day-to-day activities of the Government in a secured ambient with adoption to e-governance & Make in India.

- **MIETY: SWAN Project**
- **DCPW:** Digitalization of Wireless Communication & V-SAT. With regard to V-SAT, DCPW (Directorate of Coordination Police Wireless), MHA had conducted "Heads of PPDR Conference on 21st & 22nd January 2020" (*Public Protection & Disaster Relief*) and issued National Communication Standards for States / UTs.

ERSS Dial 112 Application - Missing Component:

Dial 112 application designed by C-DAC is the **server based "Call Centre Application"** commonly adopted by every agency developed for the purpose of **"Consumer Support and Redressal management"**. **User will customize** it to suit their time-to-time **field requirements** by the Administration (Firm / Company/Agency) through the Out-sourced Agency focusing to boost Customer Satisfaction directly proportionate to their better growth.

The application has focussed on Telephone Communication, Email & SMS which are "One-to-One" communication. If the person / officer communicated is engaged otherwise in any other sensitive issues he can not focus of the SMS or Phone calls. Moreover, we can not expect all officers are very sensitive and re-active proportionally at all times. Hence, the **"Police Wireless"**, the primary mass communication media is found missing as **"dispatcher component"** which is attached with every officer on field.

*****FOCUS:**

It is to be focuses on connecting the **Mission Mode Projects** for better efficiency and **utilization of the resources**. **Integration of programming Applications (IPAs) is the need of the hour.**

PUDUCHERRY UT

As per the directives of MHA, in Puducherry UT this project is being executed for a sum of Rs. 3,23,41,000/- as per DPR Version 1.9 of C-DAC under centrally sponsored Scheme named **"Nationwide Emergency Response System 2016-17"**.

Time-line:

- C-DAC** (*Centre for Development of Advanced Computing, R & D Organization, MEIT, GoI*) is entrusted as **'Total Service Provider'** (TSP) cum Implementation Agency on nomination for setting up of it.
- Police Department** is designated **Nodal Agency** for this Project.
- Topography:** Puducherry UT **comprises of 4 Regions**, Puducherry HQ about **170 Kms** from Chennai Airport, TN, **Karaikal** near Nagapatinam, TN / **Mahe** in Kerala **and Yanam** in Andra. All are about **130 Kms / 500 Kms / 830 Kms** respectively separated from HQ.

- D. ERSS Project in Puducherry UT is divided into **2 Phases**.
- E. **1st Phase of ERSS** was rolled out in Puducherry Region at "Central Control Room" @ PSAP @ ERSC on **25th July 2019** at the cost of Rs.2,65,32,252/- (Two Crores sixty-five lakhs thirty-two thousand, two hundred and fifty-two only) as per **DPR Version 1.9**.
- F. **2nd Phase** focuses to connect the outlying regions of Puducherry UT **Karaikal** near Nagapatinam, TN / **Mahe** in Kerala **and Yanam** in Andhra about **130 Kms / 500 Kms / 830 Kms** distance separated respectively from Head Quarters.
- G. As per the project, it was "**Stand Alone Model**" in each Region independent to each other.

*****Special Efforts Integrated by Puducherry Police:**

In light of the experience with the earlier Modern Integrated "**Dial 100 application**" of Puducherry Police which was rolled-out in 2010, the absence of **Wireless** as "Dispatcher" Component is felt. While migrating to Dial 112 application, to improve the "**Response Time and Citizen satisfaction**" through Dial 112 (Single Emergency Contact), it was added the following to the ensure service efficiency".

- **VHF Wireless local communication** as part of "**dispatcher Component**" but not integrated in the application for voice logging facility.
- Receiving of **Compliance** from the **Field Officer**
- Receiving of **Feedback** from the **Victim / Caller** sought assistance
- Sending of **weekly remainder**
- *****Generation of Monthly Graphical Reports** grouping with "**Type of Offence / Police Station-wise / etc** to enable the **supervisory officers** to **focus on the issue indicated through Public Grievance**.
- **MITRA - SOS Application** - Designed and developed by me in 2013-2015 rolled-out by HLG in 2015 - "No need to open the mobile application" just 5 click in STOP button delivers "Predefined SMS with Google location, User Name and Number and nearest Police Station Number" to all concerned configured by the individual. Available in Google Play Stores, IOS and Mobile Seva of GoI.

PAN India @ One-roof concept:

DMR COMMUNICATION NETWORK

Combined - Local Area / Wide Area / Internet Protocol

LINE OF SITE is only for LAN while IP for WAN

Focus to on the Walkie Talkie Communication Network

Digitalization of Police Wireless – (LAN + WAN + IP)

(IP Mapping for IN and OUT signal)

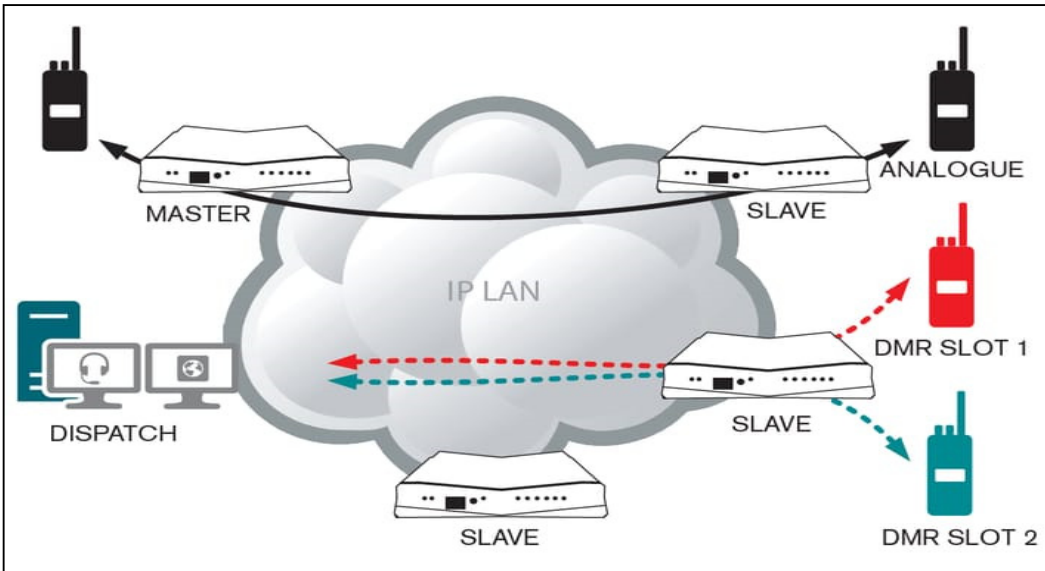
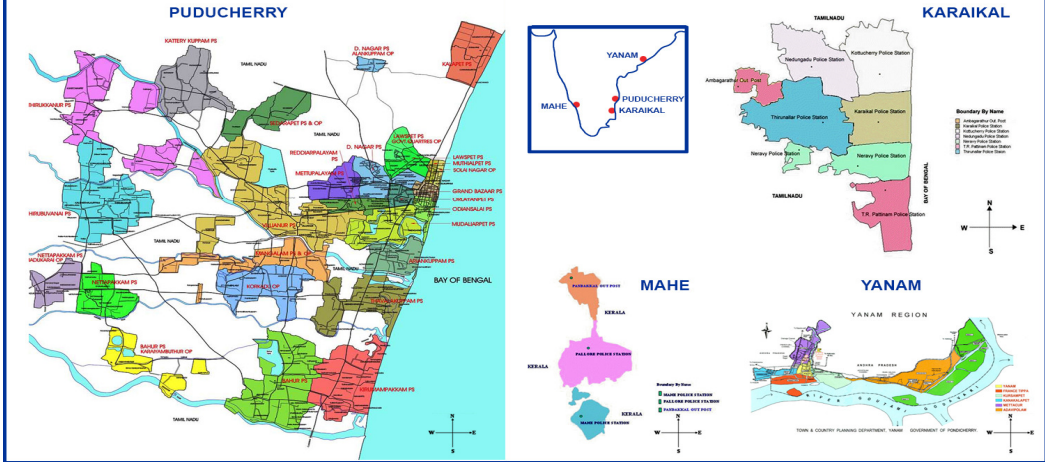
*****IP from SWAN broadband or VSAT Broadband is highly secured*****

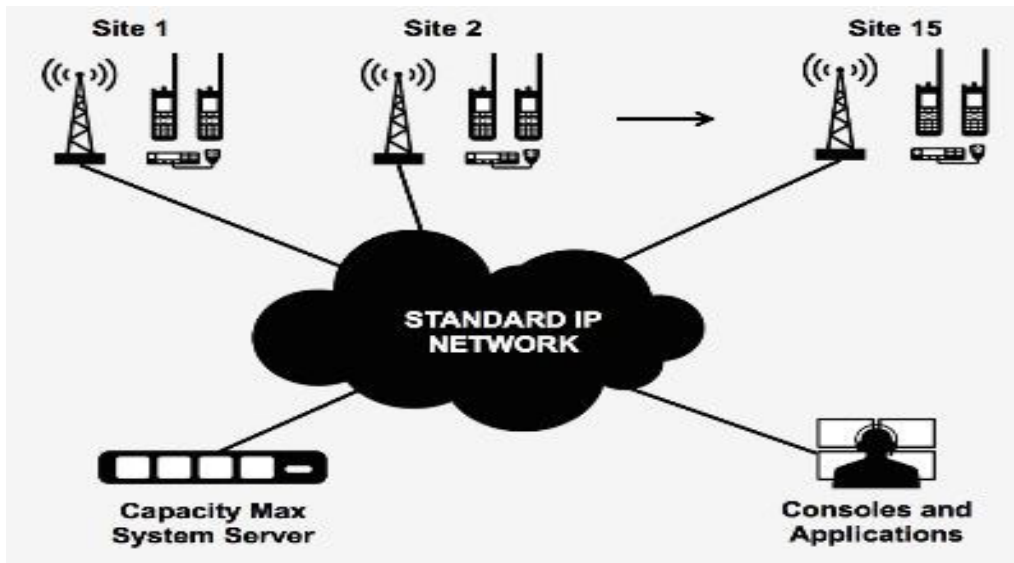
Puducherry Police had attempted to bring **Grievance Redressal Mechanism** of the Puducherry UT linked to **4 wide separated enclaves** under One-Roof through the ERSS Project, as like CCTNS and other MMP of GoI in light of the various developments focussed by **MEITY & DCPW**.

In DMR technology, REPEATERS can be connected through IP (Internet Protocol) instead of "Line of Site" and thereby connects tower-based VAN network & IP based Internet Network (VAN + IP). DMR Repeaters will get connected to each other through static IPs in different location irrespective of distance. In this any Static and Hand-held set can contact each other within the **Hybrid Network**. Thereby all the 4 regions will be connected through digitalization under **ONE ROOF**.

With the full co-operation of support of **PSWAN Team**, Directorate of IT, Puducherry and supported by Technical Team of Wireless, the trial mode of connecting to the outlying regions **Karaikal** near Nagapatinam, TN / **Mahe** in Kerala about **130 Kms / 500 Kms** distance separated respectively from Head Quarters, Puducherry was attempted **"Hybridizing VHF & IP through DMR Repeater"**. The communication found highly successful with **"Crystal Clear Signal Strength and Readability"**.

MAP SHOWING THE EXISTING POLICE STATION LIMITS OF PUDUCHERRY UT



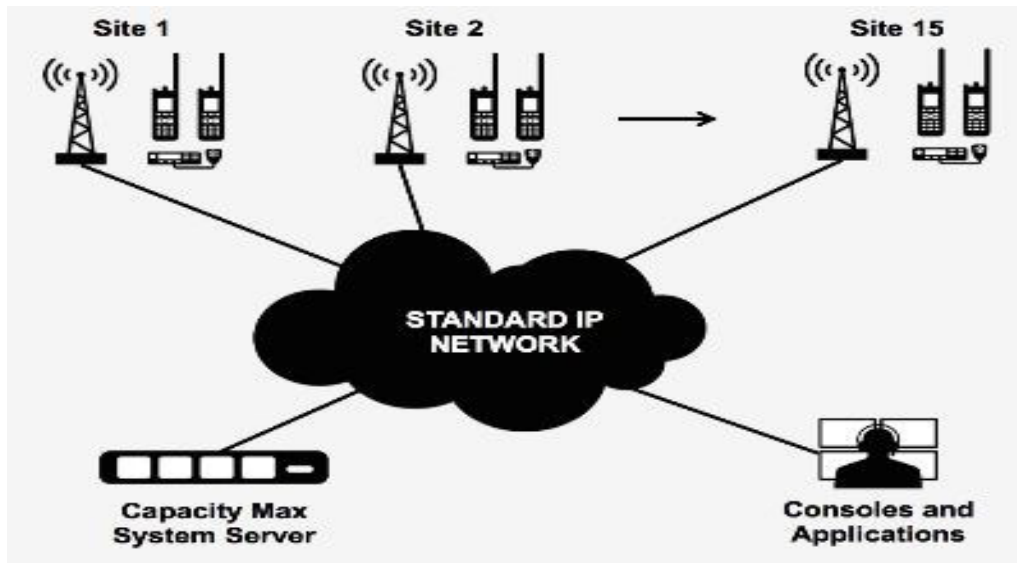
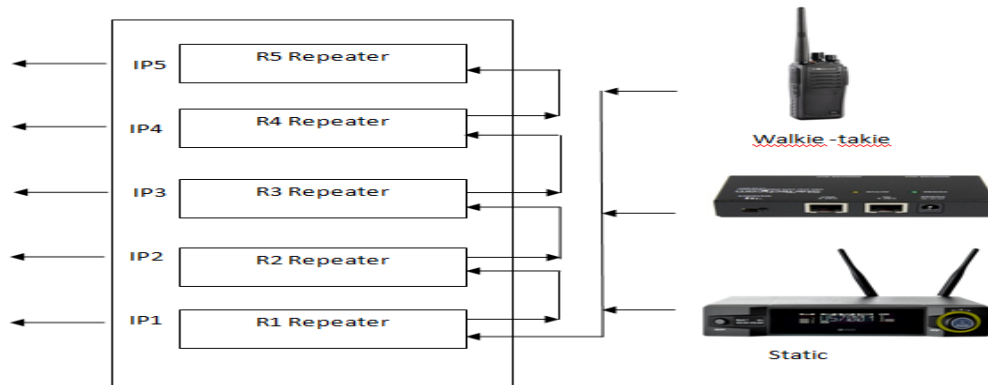


SN	EQUIPMENT	POWER	RADIUS		REMARKS
			RANGE	EFFECTIVE	
1	DMR VHF Repeater @ Simulcast Repeater	50 Watt	Based on height of the antenna		Repeater will boost signal and repeat it to all static and Walkie Talkie if they are in the effective range to the Repeater
2	Static	40 Watt	20 Km	15 Km	
3	Wakie-Talkie	5 Watt	7 Km	4 Km	

1	<u>VHF Repeater:</u>	<ol style="list-style-type: none"> 1. Effective range between Walkie-talkie and Repeater gives best Network. 2. Effective range of Walkie-talkie is <u>4 Km Radius</u> 3. Repeaters are the backbone in VHF mass communication. 4. No. of repeater worked out calculating surface area in radius to 4 Km. This will ensure stable communication irrespective of the weather under ambient conditions. 5. Effective range of Static set is <u>15 Km radius</u>, so it automatically fits in. <p><u>Components to be added are:</u></p> <ol style="list-style-type: none"> 1. Power supply and charger unit to be added (12V 15 Amps or 30 Amps) 2. HD battery 12 V /20 A
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		<ol style="list-style-type: none"> 3. Duplexer (Diamond or Celwave) to be added 4. Additional battery to meet out contingency. 5. Collinear Antenna to be specified for high gain (> 6 DB is preferred). 6. Low loss cable for repeater (50Ω) 7. Programming kit
2	<u>Walkie talkie</u>	<p>Walkie talkie is specially for field officers.</p> <p><u>Components to be added are:</u></p> <ol style="list-style-type: none"> 1. Headphone facilitates 2. Charger Units 3. Extra charger unit 4. Additional battery to meet out contingency. 5. Programming kit
3	<u>Static:</u>	<p>Static sets are mainly fixed in Office buildings and Vehicles.</p> <p><u>Components to be added are:</u></p> <ol style="list-style-type: none"> 1. Headphone facilitates 2. Power supply and retention battery unit to be added 3. Additional battery to meet out contingency. 4. 3 DB G.P Antenna (Diamond or celwave) 5. Coaxial cable 50Ω RG 213 model 6. Programming Kit 7. HD Battery 12 -100 A
	DMR Advantages	<ol style="list-style-type: none"> 1. Digitalization of Wireless as DMR supports analog mode also 2. The main advantage is that the VHF frequency allotted can be divided into "N" number of Channels (groups) in digital mode. 3. Hybrid network with IP and Towers (Line of Sight) 4. It acts as Mobile Phone with add-on facility 5. <u>ERSS Dial 112</u> the utility Application can be used incorporating GPS, voice logging, voice call, etc.

6. No Servers: Cloud Storage under NIC has to be registered after assessing the requirement of the application. Monthly charges arising from Rs.5000/- or Annual charged shall be paid to NIC.
7. Hand holding training to staffs of Wireless Technical.
8. DMR-type 3 - there are add on facility available. This will boost the multilayer repeater system for facilitating more than one group simultaneous communication added with group of IPs.



Taking advantage of the "ERSS Epitomes" - Whatsapp group, I have communicated the advantages and its reliability and requested to consider incorporating in the "Phase-II" of ERSS Dial 112 Project" highlighting the Backbone communication of Police. Considering my request, C-DAC was directed to examine. Accordingly, wireless experts from C-DAC visited Puducherry and examined the DMR Repeater **Trial Mode Network** connecting Puducherry, Karaikal & Mahe and approved it. They have reviewed their Phase-II DPR Version 1.9 and issued DPR Version 1.3 expressing their appreciations in adopting VHF Communication as "Dispatcher" component in Dial 112 Call centre Application. Now the file with Home Department for Administration Approval.

The timely support & intervention by Smt Coneenika Choudhuri of ERSS Project, Women Safety Division, MHA through Whatsapp is the turning point of our hard efforts to come true on real-time factual Police Functioning and to support Disaster management in line with the common **VISION AND MISSION** of GoI for Public Protection and Disaster management (PPDR).

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