PM-WANI: Driving Digital Transformation

CENTRE FOR DEVELOPMENT OF TELEMATICS
Telecom Technology Centre of the Government of India

PM-WANI Central Registry

Mandate Given to C-DOT – Development of Central Registry

Central Registry has following features:

- PDOA Portal for onboarding of PDOA's

- APP Provider Portal for onboarding of APP Providers.

- Admin Portal to view the PDO, APP Providers and their status's as well as provision to certify them.

- Integration with Saral Sanchar portal of DOT for ease of registration of prospective PDOAs and APP Providers.

- Test setup to facilitate certification of PDOA stack and APP.

- Main page section to provide the information about PM-WANI scheme.

Additional Feature Development in Central Registry

- Original WANI framework proposed by TRAI in 2017 was based on MAC ID. However due to MAC randomization, it is not possible to identify the end device through a single MAC Id.

- Hence **PM-WANI 2.0 Architecture** was released by C-DOT to take care of MAC randomization issue.

- Design and Development of Certification modules and setting-up of certification lab.

- Integration of CR with portals like Darpan/Prayas portal of Prime minister's schemes for the decimation of information.

- PDO Portal developed in CR to provide an interface to connect prospective PDOs with PDOAs. The details of PDO is sent to all the PDOAs.

- MIS Report generation module developed to generate various types of reports.

Additional Feature Development in Central Registry

- PDOA and APP Provider KPI (Key performance Indicator) API details provided to all PDOAs for implementation. KPI information of PDOAs are available at the CR.

- Map on the Website showing the location of PM-WANI hotspots to display WANI sites on Google map.

- Development of Multi-lingual CR. Completed in all major Indian languages (17).

- Central Registry portal migrated to NIC cloud with new URL (www.pmwani.gov.in).

- Booklet for PDO, PDOA and APP Provider prepared in all major Indian Languages (17).

- **Submitted consultation paper to DOT for the roaming feature in PM-WANI.**

PM-WANI Statistics as on 1st Feb 2023

PDOA

Registered @Saral Sanchar	**461**
Registered @Central Registry	**147**
PDOA Prov. Certify	**97**
PDOA Fully Certify	**50**
PDOA Powered by C-DOT	**80**

APP Provider

Registered @Saral Sanchar	**268**
Registered @Central Registry	**88**
APP Prov. Certify	**87**
APP Fully Certify	**31**
APP Powered by C-DOT	**83**

Wi-Fi Hotspot: 144371

State-wise PDOA Details

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State	PDOA
Karnataka	11
Delhi	24
Maharashtra	16
Uttar Pradesh	20
Punjab	3
Tamil Nadu	8
Haryana	7
Madhya Pradesh	3
Gujarat	1
Andhra Pradesh	2
Rajasthan	6
West Bengal	12
Chhattisgarh	6
Bihar	5

State	PDOA
Telangana	5
Odisha	4
Uttarakhand	2
Assam	3
Chandigarh	4
Jammu & Kashmir	1
Kerala	3
Meghalaya	1

Initiative to Develop PM-WANI Ecosystem

Challenges in PM-WANI Proliferation

- Urban Centric deployment

- High cost for backhaul

- Integrated offering by major players (PDO, PDOA and APP by single entity)

- Non-availability of plug-n-play WANI Access Point.

- Limited PM-WANI Software Solution provider

Initiative Taken by C-DOT to enable PDOAs and APP Provider

- White-label PDOA stack and PM-WANI APP for prospective PDOA and App Providers.

- Provision of C-DOT cloud to host PDOA and APP solution.

- Development of Indoor and outdoor PM-WANI Access Points (Wi-Fi 5 &6) for fast proliferation of PM-WANI by PDOAs.

- Migration of **BSNL and Railtel** Wi-Fi network to PM-WANI using C-DOT WANI token handler.

Business Support System for PDOA & PDO

- **Subscriber Management Module:** Complete management portal for the subscriber/user by PDOA

- **PDO/Hotspot Management Module:** Every PDO can create the plan and see the utilization of respective PDO.

- **Voucher Management Module:** PDOA can generate voucher as per the business condition including the wallet feature.

- **Revenue Settlement Module:** Automatic revenue settlement between PDOA and PDO as per the agreed terms and condition between PDOA and PDO

- **Device Management Module:** Complete device (AP) management, configuration, remote release upgradation and alarm monitoring feature.

- **Helpdesk Module:** Helpdesk module for the support to user and PDO by the PDOA as well as helpdesk to support PDOA by C-DOT.

Certification of Framework

PM-WANI Framework: Compliance Requirement

Interoperable Operation

- The PDO, PDOA and APP Provider need to the complied to framework for Inter-operable working

- The WANI Token handler module (responsible for the message communication between PDOA and APP) is the key component of framework.

- Access point has to be integrated with the PDOA software. Any available Access point cannot seamlessly work with the PDOA software without the support of OEM.

PM-WANI Framework: Compliance Requirement

Certification Requirement

- Certification of PDOA and APP is mandatory to meet the compliance of the framework.

- Provisional certified PDOA/APP Provider need to be formally certified for interoperable operation as per the Test Schedule and Test Procedure (TSTP).

Mandatory LI Compliance

- In the PM-WANI framework Access Point require storage facility to capture/store the NAT log for Lawful Interception (LI) related compliance.

- For the proper log, NTP support is mandatory in the Access Point for proper time-stamp.

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C-DOT

C-DOT's indigenous Wi-Fi Terminals for PM-WANI

- C-DOT's indigenously designed Wireless Terminals are ideally suited to diverse deployment scenarios

- Ruggedized Terminals capable of working in extreme operational environment

- Installed nationwide with active participation of local entrepreneurs and start-ups

THANK YOU

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