Airties Edge on prplMESH/prplOS

Airties Edge running on prplMESH EasyMesh™ agent (Turris Omnia GW), onboarding an external EasyMesh™ agent (Airties Air4960 extender)
Advanced Home Automation: MATTER on prpl

Objective

To demonstrate expanded Home Automation on prplOS using HL-API’s based on MATTER.

Demo components / Setup / scenarios

Core components integrated on prpl:

- **MATTER** as a Middleware framework (enhancements in Open source) and deployed as a LXC container on PrplOS
- **OTBR** (Thread Border Router) as a Docker Container (Open source)
- **MQTT Broker** (Open source) integrated on OPENWRT 22.03 snapshot version
- **USP Agent** (OBUSPA Open source with CG’s enhancements)
- **HL-API’s** for interfacing with USP agent and Matter software (CG’s new development)
- **TR-181 Data model** (CG’s design on existing BBF model)
- **EDGE Analytics** (CG’s enabler)
  - All the package runs on latest Linux kernel 5.15
  - Demo setup based on AMD / Pi4 ported with prpl open-source package and integration with Matter controller + USP AGENT and Open Thread Border Router (OTBR) as container with add-on libraries / components
    - **USP Controller** integrated on reference platform (Pi4 / Ubuntu) as a Mobile App to demonstrate the functionality to control both Wi-Fi and Thread devices (lights)
  - Demo Scenarios having MATTER on PrplOS over Wi-Fi and Thread that covers
    - On-boarding & Control of Wi-Fi and Thread devices (TP-link, OREIN, Nanoleaf)
    - Input and Output device linking (Motion sensor - Eve with Power socket - Onvis)

Business Advantages

Leverage MATTER technology to enable smart services / co-services for existing and new customers.

- MATTER as a Container on Wi-Fi Router (no external hub required)
- Enhance data/device security
- Improve customer experiences & CSAT
- Support for advanced / new smart services deployment
- Easy system integration / migration in the home ecosystem
USP Remotely-Managed Containerized Apps

Demonstrating...

A Service Delivery Platform that serves to orchestrate the deployment of containerized applications across a service provider’s entire fleet of devices.

Enabling the remote management of prpILCM based devices with intelligent containerized applications that can both extend the device’s overall data model and communicate with other containerized applications.

All done by utilizing standards published by Broadband Forum in USP and the Device:2 root data model.

Also, presenting.....

CommScope’s prpl Managed Services support Service Providers that wish to enjoy the freedom of managing their own prplIOS device software.
WiFi Motion Detection

- Lightweight solution to detect human movement integrated into a retail WiFi gateway
- Radio waves emitted by WiFi routers and the signals bouncing off the objects are used to gather information about movement
- Motion estimation is based on analysis of CSI data retrieved from WiFi module
- Solution based on GL.iNet GL-B1300 platform
- Built on top of prpl ecosystem
SoftAtHome leverages prpl to deploy Value Added Services

- Appstore leveraging LCM
- Open Ecosystem of partners
- SoftAtHome APPs running on prplWare
- Ubiquitous Carrier Grade Product

- Mobile Phones
- Cloud
- Home Gateways

- MDE Cloud Mobile APP
- SoftAtHome LCM Backend
- 3rd party APP
- Cognitive Wi-Fi sensing
- Bitdefender Security
- eyesON QoE Analytics
- wifi’ON Smart Wi-Fi
- SoftAtHome VAS APP

- High level API
  - prplOS
  - prplMesh Wi-Fi
  - LCM agent

- Low level API

- prpl

- Premium Sponsors
  - airties
  - Bitdefender
  - orange
  - ORIGIN
  - sam
  - vantiva

- Cloud
  - Seamless network
  - Broadband
  - MAXLINEAR
  - QUALCOMM
  - AIROHA
  - MEDiatek
We are new to prpl

We fully adopted the prpl Architecture
- We ported our app atop the prpl High-Level to make it platform-independent and portable to any HW platform
- We containerized our app to make it easily deployable from the cloud in field trials
- We adopted prpl LCM life-cycle management to remotely manage the deployed app

We have all the above running on MaxLinear chips on the prpl next-gen carrier-grade platform
- Every update to prplWare gets tested and proven on the same CI platform
- Any Operator can easily get the same prpl HW platform

Any Operator can bench- or field-trial the Beegol containerized Beegol app

Beegol runs prplMesh very successfully

All of this is working in lobby. See us there

Data and Diagnostic on the cloud

Speedtest

Wifi

ONT TX/RX Data

Geolocation of Access Problems

Transport Data

Container

BEEGOL

PRPL OS
Bitdefender®

is a global leader in cybersecurity driven by a mission for top performance in technology and innovation.

We offer:

▪ **Best-in-class solutions** that protect millions of consumers and thousands of business

▪ **The Bitdefender Subscriber Protection Platform** - an all-around security ecosystem for Telco customers

▪ **Tailored solutions and go-to-market support**

▪ **An evolving portfolio** to provide our Telco partners with the latest cybersecurity solutions available on the market.
Cognitive Systems WiFi Motion

Created the Wi-Fi Sensing market by building a robust IP portfolio and forging strategic partnerships with the world's leading Wi-Fi chipset vendors.

Partnering with a network of distribution partners 2M+ deployments

Closed direct commercial deals with multiple Tier 1 ISPs 7M+ deployments
Cyber adAPT – Who we are

- Cyber adAPT delivers an advanced, residential network-based threat detection solution for fixed and mobile broadband.

- This clientless solution meets the cyber security needs of today’s residential environment where many connected devices cannot support end point protection (e.g., IoT).

- The solution is optimized for environments where limited processing resources are available and is seamless to home network deployments.

- Real world testing shows a ~10X detection improvement over similar solutions.

- The solution has been integrated into the prpl architecture leveraging the high-level APIs and supports multiple deployment options.

- Please come and see our demo in the hall.
Domos in a nutshell.

For a device, household or population...

- Which application types are used 🎮📱👥?
  - gaming, video conferencing, video-streaming ... ?
- What is their end-to-end quality 97% 39% 100%?
  - How well are these applications performing?
- Where is any quality degradation coming from 🌈
  - Is it coming from the access network? The in-home wifi? Is it due to too low bandwidth?

Users consume applications, not networks.
Joseph Valencia
Chief Product Officer

The inventors of WiFi Sensing

The fastest growing WiFi Sensing company in the world

Most robust roadmap in the industry

60+ patents granted/allowed & ~140 filed

Enables Broadband Service Providers to launch presence-sensing-based services using consumers’ existing IoT and prpl CPE
SAM Seamless Network
Enabling CSPs To Provide A Safer, Automated, Informed, And Customized Experience To Their Residential And SMB Subscribers.

Observability
- Device Fingerprinting
- Service Identification

Cybersecurity
- Router Protection
- Network Protection
- Device Protection

See. Know. Protect.
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Application Developers Roundtable

- **Moderator**: Wojtek Makowski
  - Orange Vice President CPE Ecosystem

- **Premium Sponsors**:
  - airties
  - Bitdefender
  - Cyber adAPT
  - ORIGIN
  - sam seamless network
  - vantiva

- **Speakers**:
  - Gilberto Mayor
    - Beegol
  - George Trif
    - Bitdefender Director, Software Engineering - B2B2C
  - Bob El-Hawary
    - Cognitive Systems EVP Global Sales
  - Magnus Almquist
    - Cyber adAPT Vice President Business Development & Sales
  - Knut Joar Strømmen
    - Domos Senior Developer
  - Joe Valencia
    - Origin Wireless AI Chief Product Officer
  - Yaron Benita
    - SAM Seamless Network VP of R&D