CipherOS
Privacy Friendly & Secure OS
(Based on *AOSP*)

CipherOS on Volla Phone

Discovering Android

Android is a cutting-edge mobile operating system.

Android powers over 2.5 billion devices worldwide.

Android offers a wide range of features and capabilities.

Unveiling AOSP

1   AOSP is an open-source initiative that allows developers to access and modify the source code of the Android operating system.

2   Through AOSP, developers can create custom ROMs and modify the Android experience to suit their preferences and needs.

3   It enables community-driven enhancements and innovations, fostering collaboration and creativity in the Android ecosystem.

The Privacy Paradox

01

Data has become a prized possession, leading to pervasive privacy issues.

02

Companies like Google stealthily collect data in the background, raising concerns about user privacy.

03

The value of privacy is paradoxical, as data is both valuable and a concern.

Stealthy Data Collection

Brands collect user data in the background without explicit consent.

Stealthy data collection raises concerns about user privacy and data security.

CipherOS addresses these concerns by eliminating G-apps and services, providing a shield against unauthorized data access.

Beyond the Ordinary: CipherOS

⟩ CipherOS is a Custom OS built on AOSP , focusing on privacy and customization.

⟩ It offers an enhanced level of privacy by eliminating G-apps and services.

⟩ CipherOS provides extensive customization options for users.

Championing Privacy

01

CipherOS prioritizes privacy by eliminating G-apps and services, offering a shield against unauthorized data access.

02

By embracing alternative app stores like F-Droid and Aurora, CipherOS curates a collection of apps that respect user privacy.

03

CipherOS combines privacy with enhanced security and optimized performance through tailored approaches and solutions.

Eradicating the G-Monster

CipherOS removes all G-apps and services, ensuring user data is not collected by Google.

By eliminating G-apps and services, CipherOS provides users with more control over their privacy.

Reducing dependence on Google, CipherOS offers an alternative ecosystem of privacy-focused apps.

The Gateway to Privacy-Friendly Apps

CipherOS embraces alternative app stores like F-Droid and Aurora.

These app stores offer a curated collection of apps that respect user privacy.

Users can choose from a variety of privacy-friendly apps in these alternative app stores.

A Glimpse into CipherOS

Key Features of CipherOS:

- CustomOS built on AOSP 14 for enhanced privacy and customization.
- Elimination of G-apps and services for complete data privacy.
- Integration of alternative app stores like F-Droid and Aurora for privacy-friendly app options.
- Reducing reliance on proprietary Google services.
- Enhancing user privacy and embracing open-source solutions.

Comparison Table

Feature	CipherOS	Competitor ODM OS	Competitor BSP OS
Security and Privacy	High	Medium	Low
Performance	Excellent	Average	Good
User Interface	Customizable and unique design	Limited customization/ Shared with other brands too	No customization
Compatibility	Wide range of devices	Limited compatibility	Limited compatibility
Reliability and User Satisfaction	Exceptional	Average	Below average
Data Collection	No	High	Average

QS Design 1:   QS Design 2 (Monet Inspired):
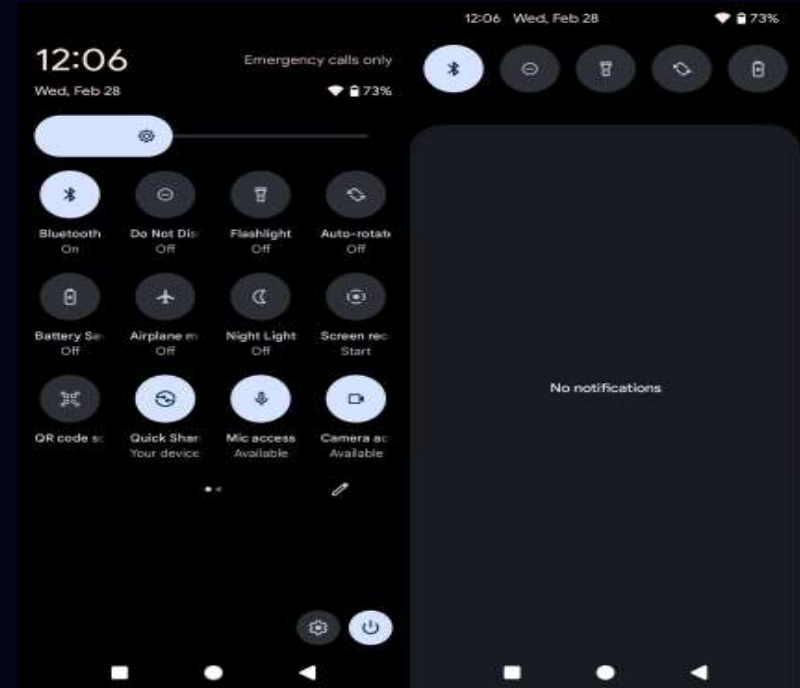
- According the need of our customers, both styles can be implemented, Design 1 is more of a modern design, whereas design 2 follows the conventional Google design with our re-imagined layout and interface.

CipherOS Next-Level Development

Development Goals:
- Redesign SystemUI, Settings, Launcher, and apps.
- Make CipherOS production-ready for enhanced performance.

Technical Process:
- Meticulously integrate custom changes with AOSP 14.1.
- Ensure compatibility and stability for a seamless user experience.

Maintaining Uniqueness:
- Port all vendor/cipher changes to AOSP 14.1.
- Preserve unique features, optimizing user data control.

Privacy Focus:
- Identify and remove Google relics (e.g., Nuking Google NTP Server GMS etc).
- Strengthen privacy and security measures.

Commitment and Symbolism:
- Demonstrate ongoing commitment to privacy.
- CipherOS as a response to contemporary Android challenges, championing privacy and redefining performance benchmarks.

Eye-Soothing Home-screen

Home-screen Launcher is most important part of an OS.

A user almost spend more than 60% of their time on their Home-screen.

Hence it should be minimal, consistent and eye-soothing for users.

Re-imagined SetupWizard:

Our SetupWizard is redesigned and re-imagined to keep modern design aesthetics and **Android's Monet Themeing** in mind, providing our users a clean Welcome screen!
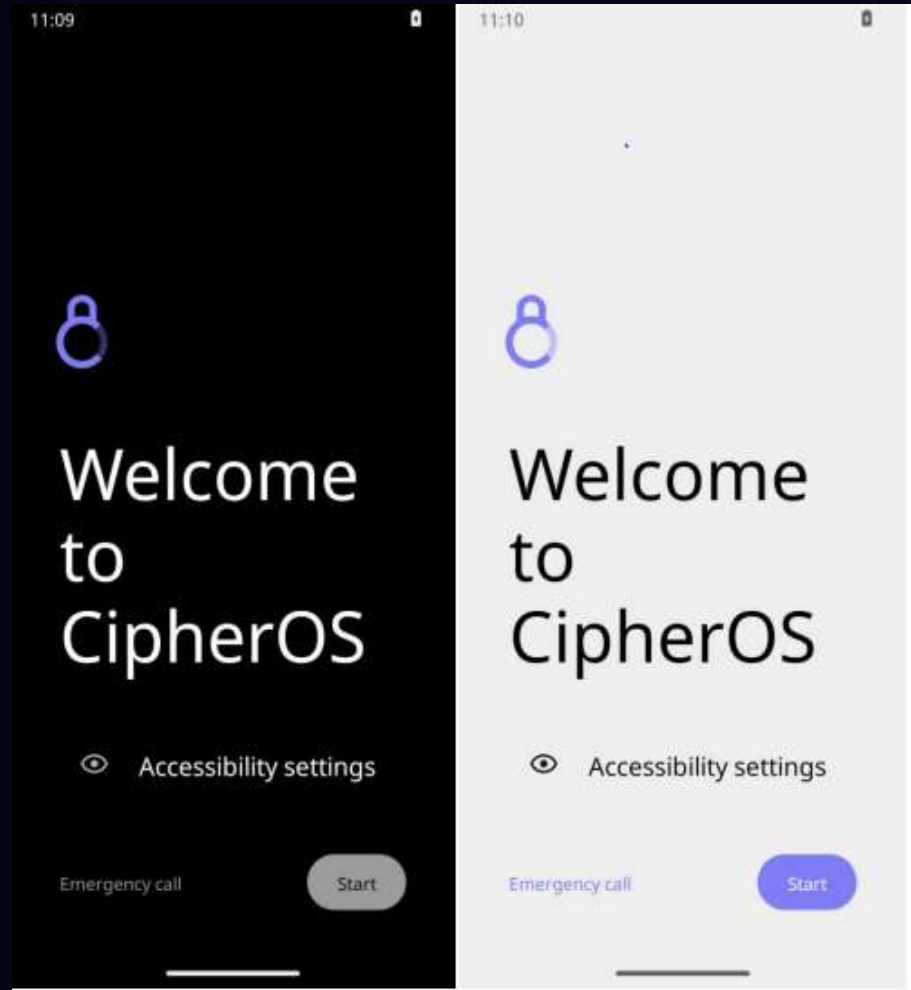
Seamless Design inspired Settings

We understand that Settings Dashboard is an integral part of an OS, and It should be designed keeping in mind the modern design aesthetics and UX elements for which users crave for, hence we redesigned it to provide a clean dashboard to our users.
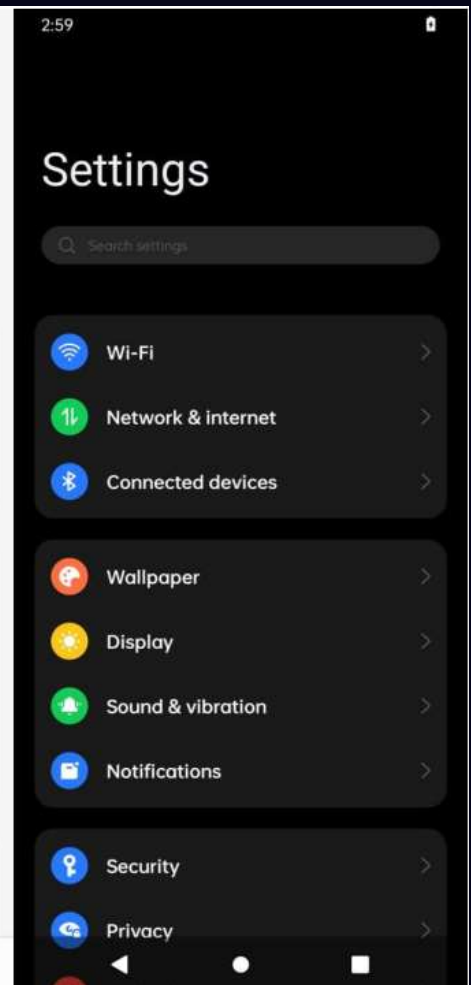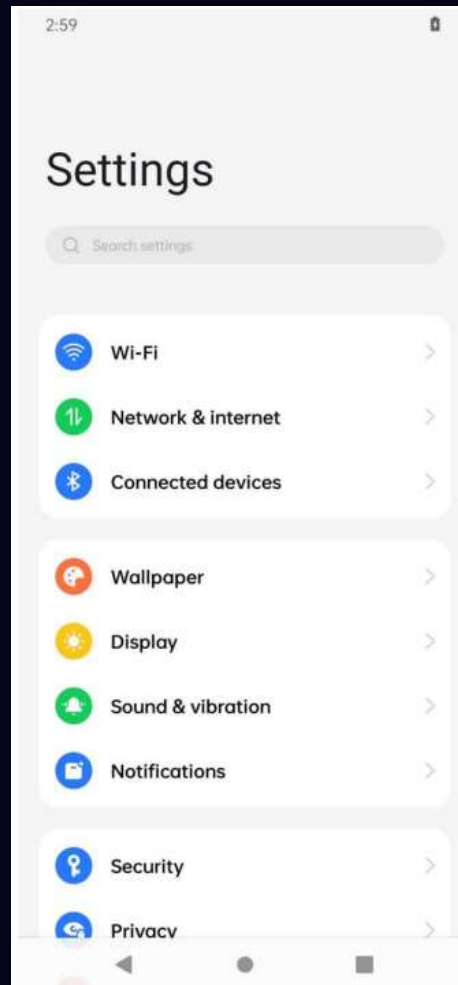
Seamless Design About Phone

The most important part of any OS is the About Phone section. Following our "Seamless-Design" guidelines, this section eliminates clutter and presents device information in an eye-soothing manner, ensuring users can easily access the details they need.

<u>Revitalized System Apps in CipherOS</u>

<u>Contact App Redesign:</u>

- Integral facet of broader system app redesign initiative.

- Emphasized visual aesthetics and user interaction for modernized interface.

<u>Dialer UI Refinement:</u>

- Overhauled Dialer UI with user-centric design paradigms.

- Enhanced intuitiveness and user-friendliness.

<u>GMS Liberation in Messaging:</u>

- Strategically liberated Messaging app from GMS dependencies.

- Aligned with commitment to reduce reliance on proprietary components.

Dialer & Contacts:
Dial In, Stay Connected.

Experience a sleek card layout inspired by the modern Material You (MD3) aesthetics.

Our design revolutionizes the Dialer and Contacts interface, providing a minimalist yet distinctive approach to presenting information.

Navigate seamlessly through your contacts with clarity and style, as we redeİne simplicity in communication.

Messaging:

Seamless Conversations, Effortless Connections.

1. Streamline your conversations with our intuitive app designed for seamless communication.

2. Enjoy privacy-focused messaging, eĪcient chat organization, and a user-friendly interface.

3. Elevate your messaging experience, where simplicity meets security.
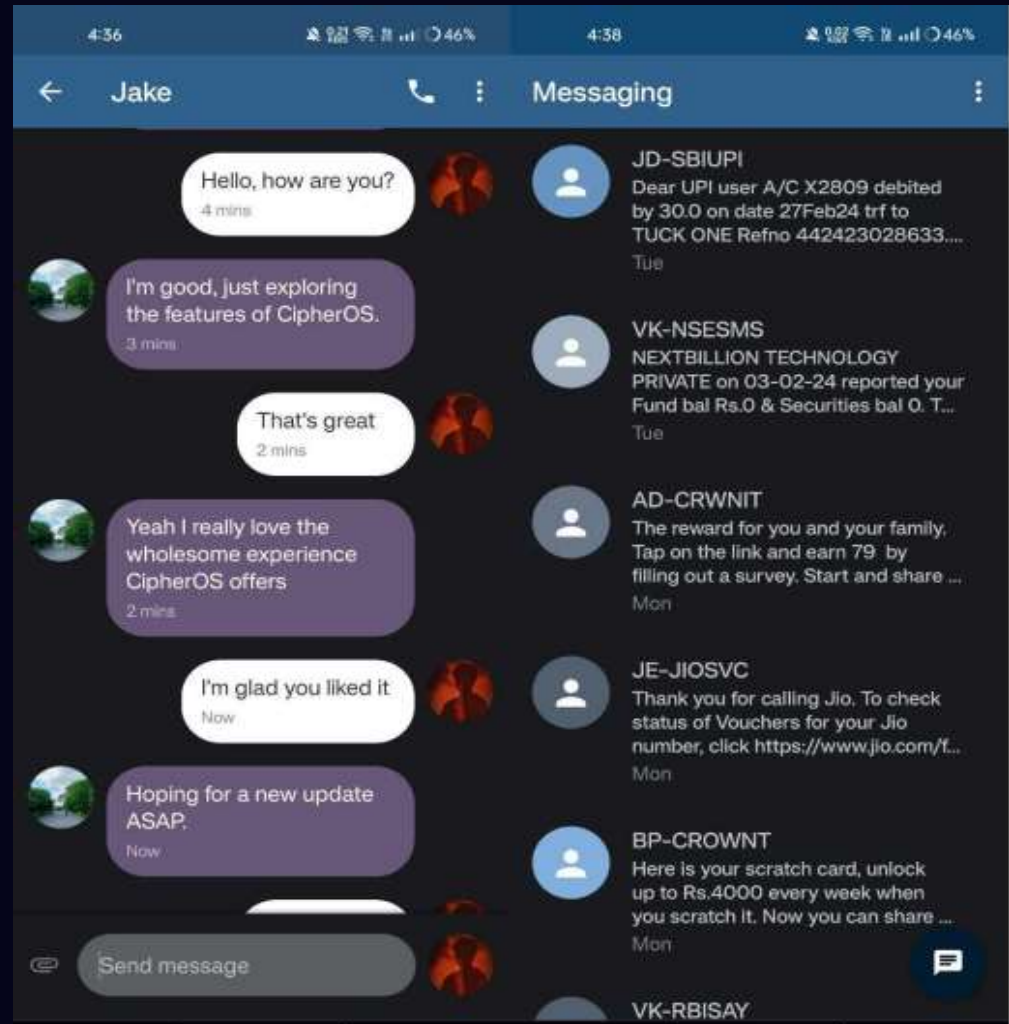
CipherOS Advancements

Elevated DNS Configuration:

1

- Seamless shift to Cloudflare or AdGuard as default DNS server.
- Enhances user privacy and optimizes domain resolution.

Strategic API Intervention:

2

- Eradicated or blocked data collection APIs within the AOSP framework.
- Reinforces commitment to fortify user privacy and control.

Forge-Ready OTA Infrastructure:

3

- Established robust OTA server infrastructure on SourceForge.
- Provides a user-friendly avenue for updates and system enhancements.

Updater: Keep your device Refreshed and Secure

We have our own OTA (Over-the-Air) Update Infrastructure, which enables us to send updates to our users monthly, Updates include security patch fixes from AOSP and new features optimizations fixes from CipherOS team, this completes our eco-system.

We provide major OS upgrades and monthly security patches.
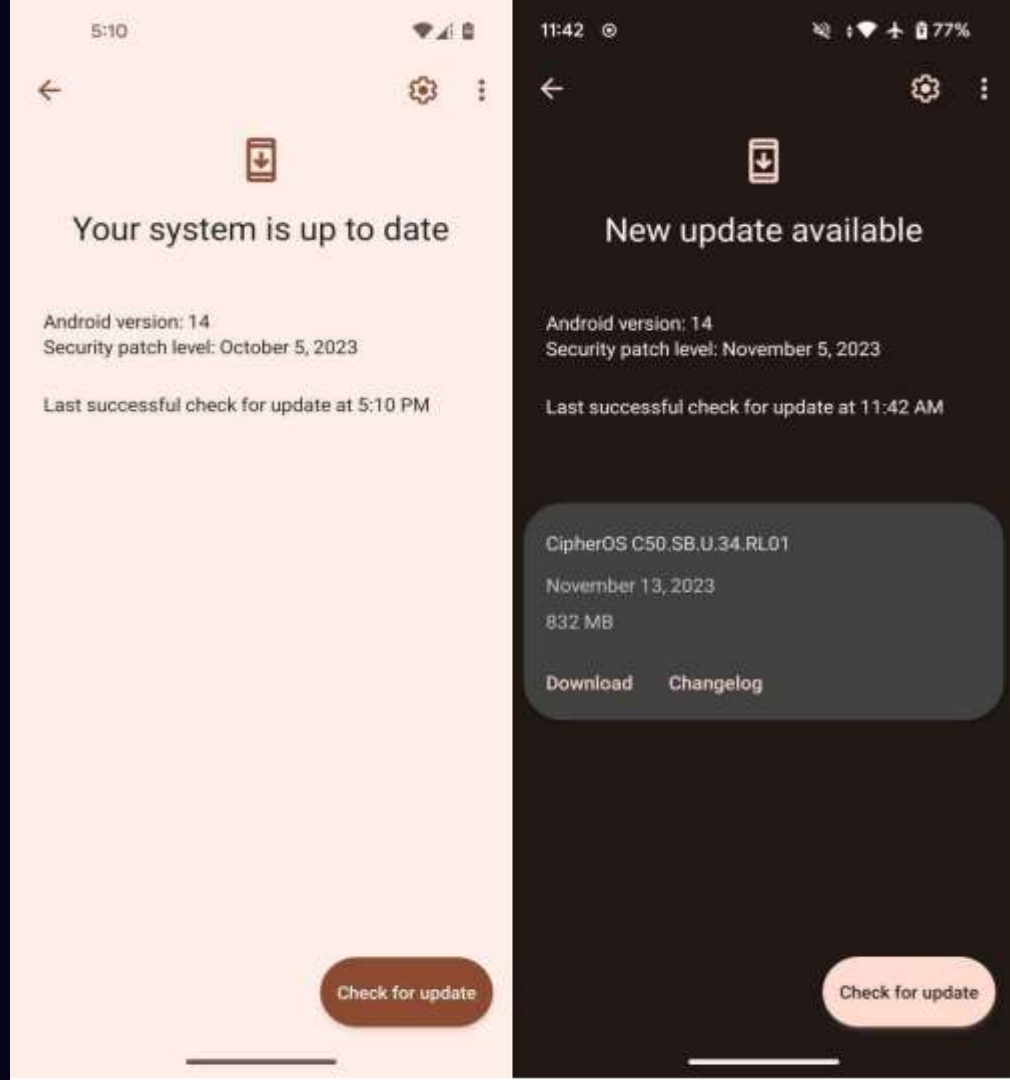
CipherOS Keyboard Enhancements

1. Keyboard Input Method Restructuring:

- Removed GMS Latin IME.
- Integrated AOSP Latin IME as default input method.
- Verified successful replacement and functioning of AOSP Latin IME on device.

2. Swipe to Type Implementation:

- Implemented swipe to type functionality in AOSP Latin IME.
- Modified codebase to enable swipe to type as default typing mode.
- Enhances typing experience for users.
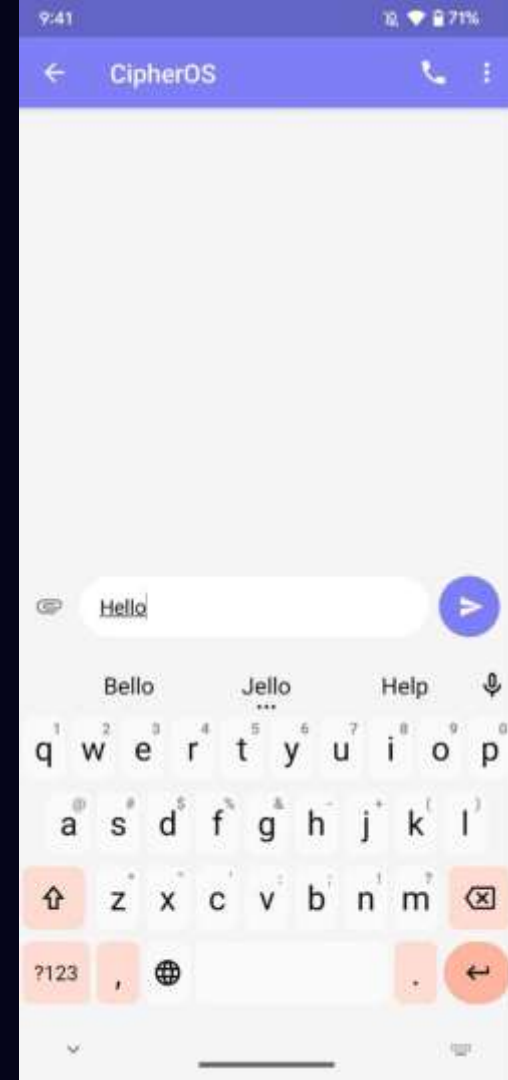
CipherOS Connectivity Enhancements

1. APN Configurations Import:

- Successfully imported and integrated APN configurations from Mediatek and Qualcomm into the Android build.

- Ensures proper configuration of cellular data networks for different carriers and regions.

2. Android Auto Support:

- Initial implementation of Android Auto support for seamless integration with in-vehicle infotainment systems.

- Allows safe access and control of smartphone functions while driving.

3. 5G Network Mode Introduction:

- Integrated 5G-SA (Standalone) and 5G-NSA (Non-Standalone) network mode options.

- Enables users to select and utilize appropriate 5G network mode based on carrier's infrastructure and capabilities.

CipherOS Face Unlock Service

Face Unlock Service Integration:

1
- Successfully integrated a face unlock service utilizing a custom bio-metrics impl.

- Enables secure and convenient facial recognition-based device unlocking.

Face Unlock Service Modification for App Authorization:

2
- Modified the face unlock service to extend functionality to app authorization.

- Supports facial recognition-based authentication within third-party applications for a seamless and secure experience.

Security Compliance Testing:

3
- Rigorously tested the integrated face unlock service and modifications.

- Ensured compliance with security standards and best practices for robust security measures.

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CipherOS Build Management and Release

1. Build Preparation and Release:

- All device sources are available on Github, Our builds can be reproduced by anyone, we provide a detailed guide to build it yourself!
- Crafted archives for seamless installation and deployment of the updates

2. Build Publishing:

- Uploaded and published completed builds on the SourceForge server, our OTA API is also fully opensource

- Provided access to the wider community for downloading and experiencing the custom ROM.

3. Code Repository Management and Final Testing:

- Pushed entire codebase and project work to GitHub organization's repository for version control and collaboration.

- Conducted rigorous compliance testing to validate builds against latest AOSP standards and guidelines.

CipherOS support for Volla Phones

1. Preliminary work [July-August 2024]:

- Initially we'll start developing CipherOS for Volla Phone Quintus and Volla Phone 22, by initial device tree porting
- Initial Betas will be available by August-September 2024.

2. Publishing Beta & User Feedback [September- October 2024]:

- Uploaded and published completed builds to Volla Community, when it's stable publish CipherOS as alternative OS.

3. Future of CipherOS:

- As an organization which promotes security & privacy, all of our repositories will be available on our github for transparency.

- We will be also working on porting some features from CipherOS to VollaOS!

Thank-you!

CipherOS Team

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