The distributed OpenHarmony Compatible operating system that connects consumer devices big and small

IoT Week Dublin 2022
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THE DEVICE FRAGMENTATION PHENOMENON IN NUMBERS

Global IoT devices statistics and forecasts (100 million units)

- Number of IoT devices: 3.96 devices/person
- Number of smartphones/PCs/tablets: 2.09 devices/person
- Number of IoT devices: 9.27 devices/person

Number of apps:
- 3.9 million+

Different Devices:
- Smartphone OS: 3.9 million+
- Watch OS: 20,000+
- TV OS: 10,000+
- Head unit OS: 100+

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WHY THIS IS HAPPENING?

- Fragmented and isolated consumer devices market
- Technology silos
- Small developers ecosystem
- Lack in content creation portability, Stable SDK and non unified tools
- Communication between devices is enabled by discrete apps that are connected to the Cloud to share and sync data, with lack in performances, speed along with security and privacy issues
IoT NEEDS COMMON STANDARDS TO LIVE UP TO ITS PROMISE OF EMPOWERING CONSUMERS’ DAILY LIFE

- One single Cohesive application
- Interoperability between devices
- One broad range ecosystem
- Write once, deploy on different devices
- In-house secured data sync and sharing
COLLABORATIVE HARDWARE, FORMING A SINGLE COHESIVE DEVICE

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1. Auto detect app context and device requirement
   When receiving the video call
2. Display to TV/Audio to speaker/Switch to smart camera
3. User smartphone to adjust the camera angle and zoom
DISTRIBUTED OPEN OS FOR DEVICES BIG OR SMALL

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WHY VENDOR NEUTRAL OPEN SOURCE CAN HELP REDUCE THE DEVICE FRAGMENTATION PHENOMENON

Open source technology baseline, is the only way to achieve real co-operability, interoperability and communication between different devices because they are natively talking the same language.

THE INFLUENCE ON REQUIREMENTS, ROADMAP AND FEATURES IS THE KEY!
ECLIPSE FOUNDATION AND OPENATOM FOUNDATION FORGE A STRATEGIC INITIATIVE FOCUSED ON OPENHARMONY OS.

TO HAVE TWO VENDOR NEUTRAL OPEN SOURCE FOUNDATIONS COME TOGETHER TO COLLABORATE JOINTLY IN THE DEVELOPMENT AND ECOSYSTEM-BUILDING OF AN OPEN SOURCE PROJECT IS UNPRECEDENTED.

PERHAPS IT IS FITTING THAT A DISTRIBUTED OPERATING SYSTEM REQUIRES A DISTRIBUTED OPEN SOURCE DEVELOPMENT.
Attract and build a strong European and global ecosystem

Root Oniro globally granting OpenHarmony compatibility to ensure Oniro conforms to European & global developers/ users needs

Attract and build a Chinese ecosystem for OpenHarmony

Run events and drive community engagements locally in Mandarin at times convenient to China’s developers

Access onboarding of many new Chinese companies to the open source community for the first time
Oniro value proposition

EU centric Open Source project with global outreach: co-innovation through collaboration.

Oniro targets all devices, big and small. Unified set of configs, APIs, protocols, practices...

Industry alignment for a global market: compatibility program incl. OpenHarmony

Eclipse Foundation value proposition: Open Source, open Governance, vendor neutrality
What is Oniro

Ecosystem
- Members
- Oniro compatibility program

Working Group

Community
- Contributors
- Open Source projects
- Oniro Release: Platform +specifications

Platform Roadmap
Specifications Roadmap

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ONIRO COLLABORATIVE AI AGENCY THAT DELIVERS A SMART HOME CENTERED AROUND YOU
So let's look at an example of a day with Oniro in your life.
Oniro Project integrates its various components into a representative use-case called a *Blueprint*.

A blueprint shows off the OS capabilities and best practices in building software-based products.

To this end, blueprints are a way to distill real-world products into a **minimum viable product** to demonstrate how partners and users may adopt Oniro Project securely in their own products.

**What is a Blueprint?**

1. It shows off a key feature or two of the product it is trying to emulate
2. It focuses on reproducing a representative user interaction for a use case
3. It is implemented on the closest appropriate reference HW platform from Oniro Project
Current Oniro blueprints

The Vending Machine blueprint provides full support for two complete setups. One based on Raspberry Pi 4B, an ARMv8 target, and one based on SECO B68, an X86 board.

https://www.youtube.com/watch?v=HQ9hD63ypvl&list=PLy7t4z5S YNaQBDReZmeHAkEcYmu0LLa&index=10

CHECK THE DOCUMENTATION:

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Smart Gateway

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LET'S DIVE DEEPER INTO ONIRO LATEST BLUEPRINT

INTRODUCING THE MULTI-BOARD, WEARABLE DJ STATION TO EMPOWER DJS MORE FREEDOM AND CREATIVITY TO EXPRESS THEIR MUSIC. WE DISCUSS THE IMPLEMENTATION OF THE BROADCAST STATION, THE WEARABLE COMPONENT, THE MIDI TRANSPORT MECHANISM AND THE CHALLENGES WE ENCOUNTERED DURING THE CREATION JOURNEY.
Oniro Working Group Lifecycle Progression

**Phase 0**
Opportunity

- Validate the viability of the Working Group and identify the Lead Organization.

**Lead Member**

- October 26th 2021

**Phase 1**
Proposed

- Define Working Group Charter and Participation Agreement. Call for participation

**Founding Members**

- January 27th 2022

**Phase 2**
Incubating

- Kick-off governing bodies. Program Plan and budget.

**Recruiting Members**

- May 25th 2022

**Phase 3**
Operational

- Working Group fully operational.

**Ecosystem**
Our Existing & Growing Ecosystem

- Linaro
- Huawei
- SECO
- ARRAY
- TechPark Sudtirol/Alto Adige
- Synesthesia
JOIN ONIRO... BUT WHY?

- Begin to put an End to the Fragmented Device Phenomenon
- Oniro offers the vendor neutral, open governance and open source required
- Solid technical team already in place
- Oniro is done by the industry, for the industry and the consumers
- Oniro Compatibility Program: leveraging Eclipse Foundation experience.
- Aligned and shared specifications with OpenHarmony (OpenAtom Foundation)

OR........ PUT UP WITH THE HEADACHES OF DEVICES BEING UNNECESSARILY CONSTRAINED
WHAT’S IN IT FOR YOU?

CONSUMERS
If you are an end user, Oniro integrates your various smart devices to implement fast connection, capability collaboration, and resource sharing between them. This way, your services can be seamlessly transferred to a suitable device that delivers smooth all-scenario experience.

DEVICE MAKERS
OEMs, SILICON VENDORS, CHIPSET MANUFACTURERS
If you are a device developer, Oniro uses a component-based software design to tailor itself to your particular device forms based on their respective resource capabilities and service characteristics.

CONTENT CREATORS
If you are an application developer, with Oniro, you will have the choice to focus on upper-layer service logic and develop applications in a much easier and more efficient way.

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HOW TO GET STARTED

- Download
- Use
- Read the documentation
- Contribute into the community

Join our IRC Libera Chat #oniroproject [https://web.libera.chat/#oniroproject](https://web.libera.chat/#oniroproject)

VISIT OUR [WWW.ONIROPROJECT.ORG](http://WWW.ONIROPROJECT.ORG) WEBPORTAL

Building together a fully-connected all-scenario intelligent ecosystem
Thank you!
It’s now time for Q&A

Communication channels
Oniro Working Group mailing list: oniro-wg@eclipse.org
Oniro Projects (technical) mailing list: oniro-dev@eclipse.org
Chat channel: #oniroproject at libera.chat
Twitter: @oniro_project #Oniro