The distributed operating system that connects consumer devices big and small

FOSDEM 2022. Lightning talk
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The speaker: Agustín Benito Bethencourt (toscalix)

- Oniro Program Manager at Eclipse Foundation
- +17 years experience in Open Source as entrepreneur, executive, manager or consultant.
- Focused on operating systems and platforms in a variety of companies, foundations and trade associations.
- Remote work advocate, located in Málaga, ES
- More about toscalix at http://www.toscalix.com
Oniro in links

Assets

- Website: https://oniroproject.org/
- Code and configurations.
- Default license: Apache-2.0 Others approved too.
- Technical documentation
- Oniro video channel

Communication channels

- Oniro Working Group mailing list: oniro-wg@eclipse.org - Subscribe - Archive
- Oniro Projects mailing list: oniro-dev@eclipse.org - Subscribe - Archive
- Chat channel: #oniroproject at libera.chat
- Twitter: @oniro_project
DELIVERING A **UNIQUE USER EXPERIENCE** ACROSS DIFFERENT CONSUMER DEVICES AND SCENARIOS

In a **fully-connected world vision**, consumer device fragmentation is impacting on our daily life...

Think about **how many devices you use on a regular basis** that accompany your day and **how many actions you have to do to achieve a good user experience from each of them**.
Oniro envisions an evolution in the operating system front that will foster more modular platforms, covering a significantly wider range and number of connected devices, while granting developers a simpler and more curated development experience, enabling them to provide consumers a significantly better user experience.
Oniro value proposition

GLOBAL ECOSYSTEM ROOTED IN EU: CO-INNOVATION AND COLLABORATION.

UNIFIED SET OF CONFIGS., APIs, PROTOCOLS, ETC. FOR ALL DEVICES, BIG AND SMALL

INDUSTRY ALIGNMENT: SHARED SPECIFICATIONS AND A (ECLIPSE) COMPATIBILITY PROGRAM

VENDOR NEUTRAL, OPEN GOVERNANCE, OPEN SOURCE
The **Oniro Working Group** creates an ecosystem of organizations to support the community in the production and evolution of the Oniro technologies as well as to drive its commercial success across different industries. Such an ecosystem arises in a neutral-vendor environment where collaboration is promoted under the core Eclipse Foundation principles, like transparency and openness.
Oniro Working Group Lifecycle

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
Mid 2022

Phase 3
Operational
Working Group fully operational.

Ecosystem

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Eclipse Oniro Core Platform is an Open Source project aimed at reducing fragmentation in the consumer and IoT device industry which is interoperable with OpenAtom Foundation's OpenHarmony project. The project aims at fulfilling the vision of "any app running anywhere", where "any app" is achieved via building Oniro as an OpenHarmony compatible implementation, ensuring interoperability, and "anywhere" is achieved by leveraging the Linux Foundation's Yocto Project tools and rich ecosystem as well as a well known upstream technologies.
Eclipse Foundation Launches Oniro: key milestones

**Eclipse Foundation**

- Eclipse Foundation and OpenAtom Foundation collaboration
  - Framework agreement around Open Harmony: [press release](https://example.com) on 28–Sept.-2021
- IoT & Edge WG and Oniro collaboration: WIP
- Eclipse Foundation and OpenAtom Foundation collaboration agreement: WIP.
- Work on specifications start at Oniro Working Group and projects.

**Oniro Working Group**

- Oniro WG launch the Call for Participation on 26–Oct-2021
  - [Press release](https://example.com)
  - Oniro WG [Charter](https://example.com)
  - Oniro announcement: keynote at EclipseCon 2021.
  - Founding Members join Oniro WG ([Participation Agreement](https://example.com)).
- Incubation Phase
  - Oniro WG Steering Committee kick-off on 27–01–2022
  - Then Marketing Committee kick-off
  - Oniro WG Program Plan and Budget creation and approval.

**Oniro Projects**

- Oniro TLP launch for community review on 26–Oct-2021
  - [Press release](https://example.com)
  - Oniro TLP [Charter](https://example.com)
- Oniro track at EclipseCon 2021
  - Check the Oniro [video channel](https://example.com).
- Oniro projects approved. Now at provisioning stage:
  - IP/license evaluation
  - Code migration to be hosted by Eclipse Foundation.
- Engineers working at Eclipse Foundation infrastructure.
- Oniro 1.0 release

[https://www.oniroproject.org](https://www.oniroproject.org)
Oniro: key elements

- Solid technical team
  - Over 10 technical talks approved at FOSDEM 2022.
  - Upstream core contributors to a variety of projects.

- Well structured roadmap
  - Open and transparent requirement gathering and prioritization process
  - First Oniro Platform release expected in 2022
  - Maintenance cycle associated to each release.
  - Blueprints as a way to interact with Oniro consumer or integrator organizations

- Specifications and Compatibility Program: towards a global market
  - Leverage the Eclipse Foundation experience. Eclipse Foundation Specification License v1.0
  - Includes a Test Compatibility Kit (TCK) for self testing.
  - Aligned and shared with OpenHarmony (OpenAtom Foundation)
Oniro architecture: layers

**Application Layer**
When completed, it will host the system and third-party applications. Oniro applications will be able to use APIs to expose business logic as abilities that may be utilized inside other applications.

**System Service Layer**
It will contain the bulk of the differentiating features of Oniro. It will provide a complete set of capabilities essential for Oniro to offer services for applications through the Framework Layer.

**Framework Layer**
It will provide an SDK to develop Oniro applications in multiple languages such as Java, C, C++, and JS depending on the target device class and its HW constraints.

**Kernel Layer**
Oniro will support a multi-kernel design design out of the box so that appropriate OS kernels can be selected for devices with different resource limitations.

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BluePrints at oniro

Minimal Viable Products
Validate Integration and Testing
Showcases

Address a specific market use-case
Feed Oniro requirements

OpenSource Design & Code
Reproducible

Built on Oniro-core platform
Point of convergence

The distributed operating system that connects consumer devices big and small
Current oniro blueprints

The distributed operating system that connects consumer devices big and small
A unique opportunity to frame the Operating System for the XXI century!
Ready for the machine economy!