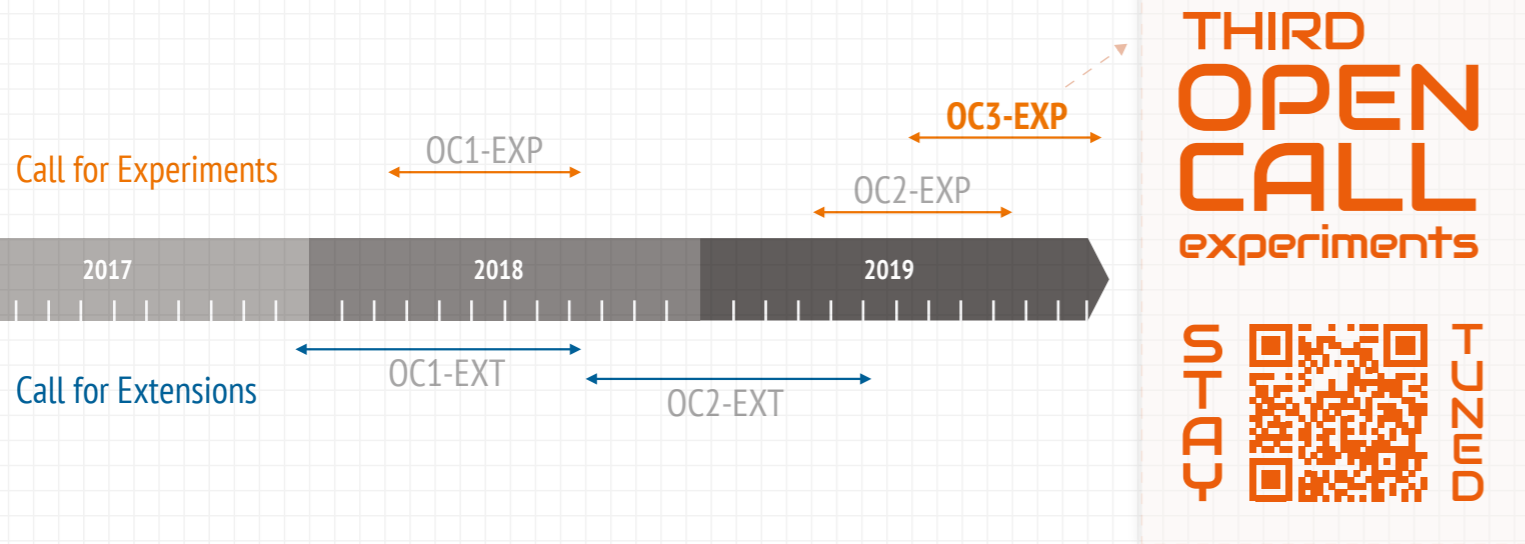# ORCA OPEN CALLS

The ORCA project distribute 2M€ via several Open Calls to financially support the involvement of Third Parties between experiments and extensions.

Call for Experiments

OC1-EXP
OC2-EXP
OC3-EXP

2017 2018 2019

Call for Extensions

OC1-EXT
OC2-EXT

THIRD OPEN CALL experiments

STAY TUNED

PROJECT FACTS

Start: January 2017
Duration: 36 Months
Call: H2020-ICT-2016
Topic: ICT-13-2016
Research & Innovation Action

FOLLOW US!

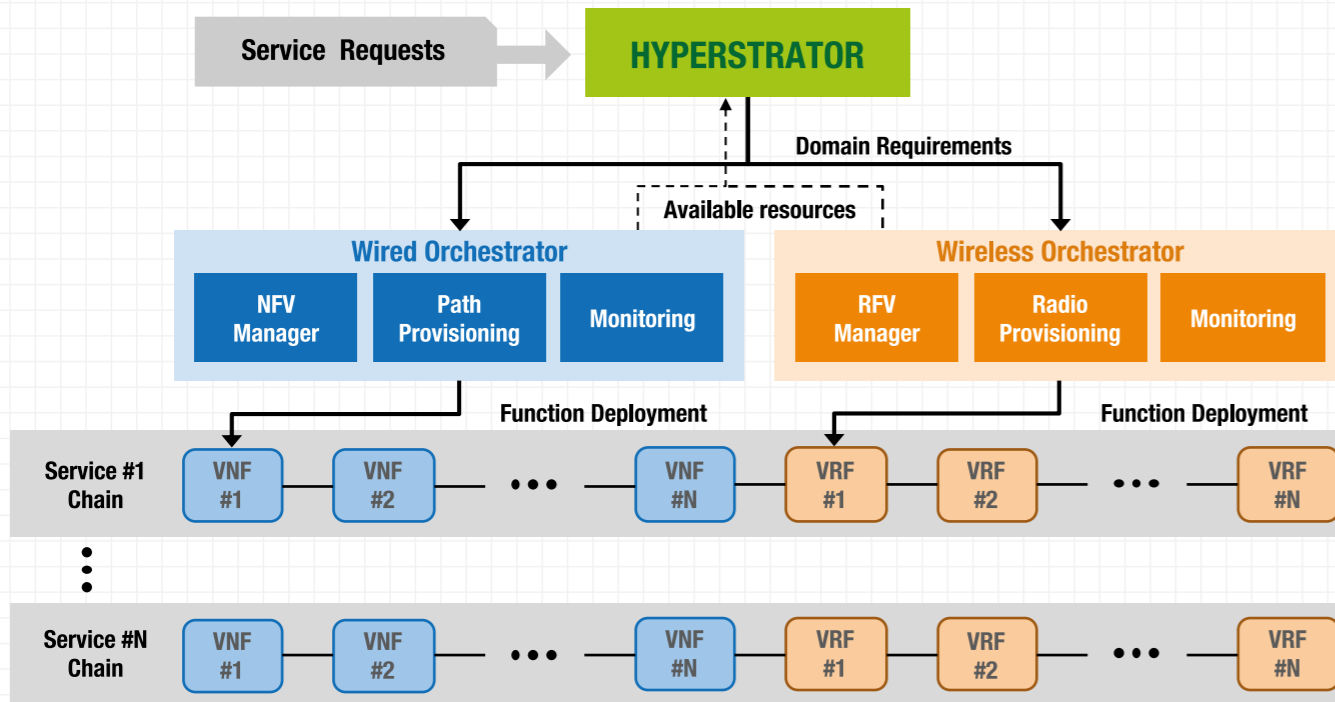@ORCA_Project_

groups/8589461

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imec
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TECHNISCHE UNIVERSITÄT DRESDEN
RUTGERS
THE STATE UNIVERSITY OF NEW JERSEY

Orca
Orchestration and Reconfiguration Control Architecture

SOFTWARE DEFINED RADIO FACILITY

TO ACCELERATE WIRELESS INNOVATION

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ORCHESTRATING DIFFERENT NETWORK SEGMENTS

ORCA believes that each network segment should have their own orchestrator, tailored to the segment's particularities. The use of a separate orchestrator for each network segment reduces complexity and breaks down the larger E2E network orchestration problem into smaller parts. In this way, each segment orchestrator can focus on a limited number of well-defined tasks, reducing the software complexity, both in terms of design and implementation.

Service Requests → **HYPERSTRATOR**

Domain Requirements

Available resources

Wired Orchestrator
- NFV Manager
- Path Provisioning
- Monitoring

Wireless Orchestrator
- RFV Manager
- Radio Provisioning
- Monitoring

Function Deployment

Function Deployment

Service #1 Chain: VNF #1 — VNF #2 — ... — VNF #N — VRF #1 — VRF #2 — ... — VRF #N

Service #N Chain: VNF #1 — VNF #2 — ... — VNF #N — VRF #1 — VRF #2 — ... — VRF #N

WIRED ORCHESTRATION

A wired network orchestrator is in charge of provisioning paths and deploying services in a wired network slice, building on SDN and NFV respectively.

WIRELESS ORCHESTRATION

A wireless network orchestrator is in charge of instantiating Radio Access Technologies (RATs) and providing radio coverage, leveraging Software defined Radio (SDR) and Remote Radio Heads (RRHs).

TECHNICAL HIGHLIGHTS

ORCA makes SDR talk to commercial devices

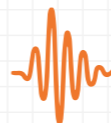ORCA creates multiple radio interfaces on an SDR for free

ORCA makes real-time experimentation with SDR as easy as simulations

ORCA provides multi-standard SDRs for prototyping on all layers

ORCA offers flexible low-latency MAC-PHY architecture

ORCA provides full-duplex capable SDRs for high-throughput networking experimentation

ORCA offers CSMA MAC with real-time collision detection

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