

Autonomic Functions Coordination

[draft-ciavaglia-anima-coordination-01](#)

IETF95 – Buenos Aires
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(remote presentation)

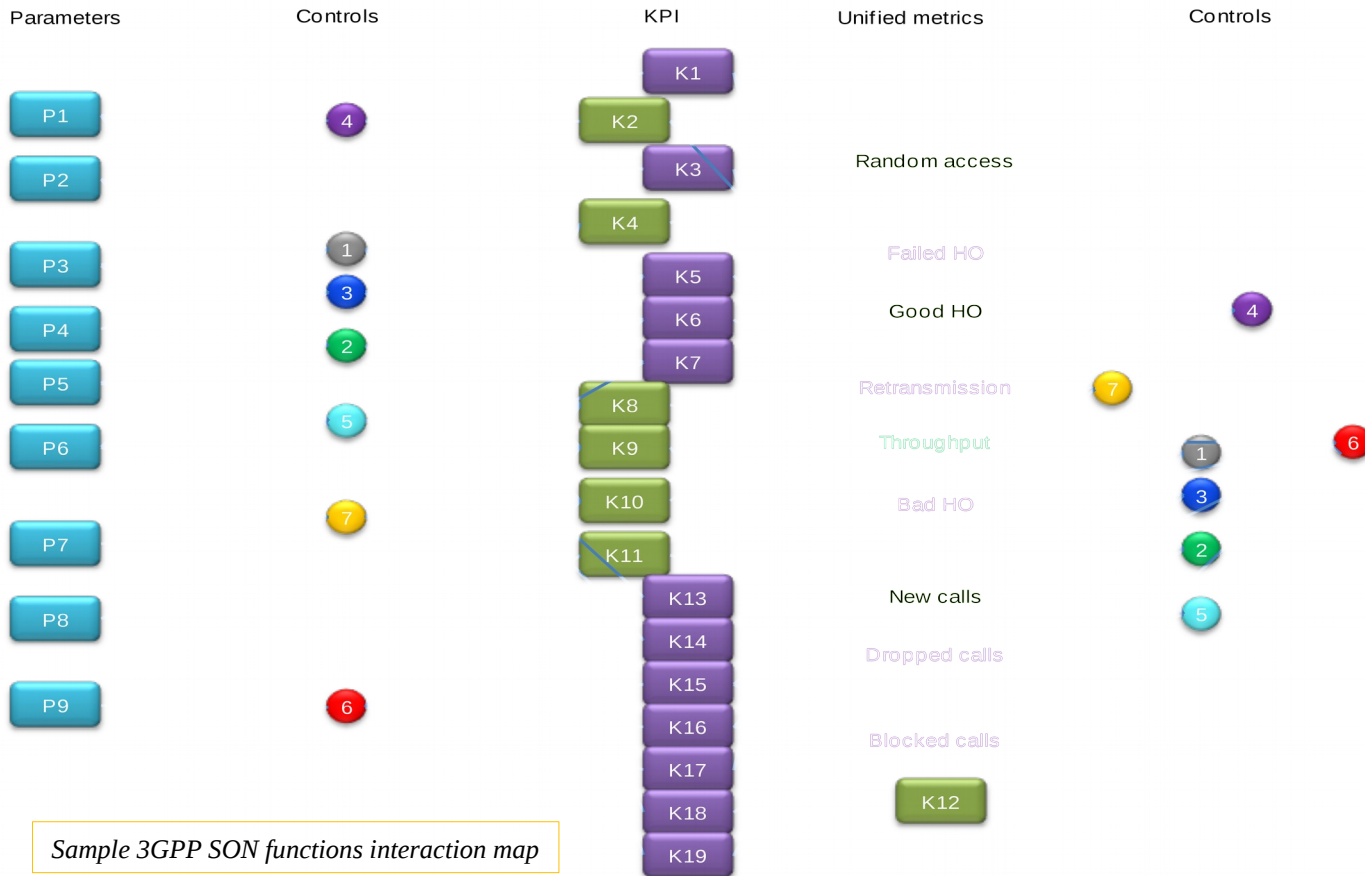
Background

- Topic presented at [IETF92/Dallas](#), [IETF93/Prague](#)
- Section 9 of ANIMA reference model

Today:

- Highlight the problem (again ^^)
- Discuss link with 'Intent'

Why coordinate...?



... because AF interactions are complex

AF interactions

- Can be Conflict, Cooperation, Dependency...
 - Complex to manage by humans because of
 - scale, speed, hidden dependencies
- ⇒ **Proposal:** Coordinate collective behavior via a common function available to all AFs

Sketch of a solution

- A common coordination function:
 - Provides means to achieve **local and global stability, convergence**
 - Is a **re-usable** component
 - Is useful for the **whole network lifecycle** (i.e. design, deploy, and operation stages)
 - Offers **multiple strategies** (algorithms) to solve different coordination problem types
 - Requires **common AF descriptors, AF lifecycle and representation of information/knowledge** (cf. next presentation)

- ▣ **Essential feature for safe operation of autonomic networks**

Discuss: link with Intent

- As a building block of the policy engine (?)
 - Used to **resolve policy conflict/inconsistency** as a “**logically central entity**”
 - Provides **unified interfaces** and **customizable / evolvable algorithmic**
- Higher-level (domain/network) view on operations
 - **Insightful** on what’s happening (oscillation, deviation, degradation)
 - Problem-solving tool box: algorithms catalog, **reasoning capabilities**
 - **Run-time adaptation** of collective behavior
- Intent for guidance of coordination strategy (?)
- Intent from coordination to AFs / other entities (?)