Intent based networking
And how Machine Learning Can Bring Convergence
Simplifies the North bound interface

- Hiding complexity from the network application programmer or user
  - Tell me just what you need
  - And I'll find out what you need to do to have it
- For the academics
  - A LaTeX for networking: WYWIWYG

More than just yet another trendy topic in the SDN/NFV world.
- **ONF**
  - Principles of operation
  - Information models

- **OSSDN**
  - BOULDER
    - Objective: "provide authoritative interface components for building dissimilar controller system implementations"
  - For that, they define:
    - tools,
    - documents
    - information model and data model translation tools

- **OpenDaylight:**
  - Network Intent Composition
  - IBNEMO
  - NETIDE

**State of the Art**
5GPPP projects are using ODL, ONOS, etc.

However, each of these controller platforms have different approaches to intent.

Convergence is key:
  - Exploit synergies between projects
  - Foster a common approach
    - To implementation
    - To dissemination
    - To standardisation
- COGNET is building a **network management** solution based on machine-learning
  - Relying on SDN and the NFV architecture framework
- The current stress is on
  - Acquiring knowledge
  - PoC of machine learning techniques
- Closing the loop:
  - Translate actions into an intent
  - Feed intent into the loop
- A common understanding/agreement between 5GPPP projects on an intent based interface would allow all projects to benefit from COGNET findings

**An example:**
Coupling machine learning with intent
Essentially defining a Machine Learning Cluster (MLC) and two data flows

- **Input**: measurement and monitoring
- **Output**: policies

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- **Why not intent here?**
  - Would allow us to provide a uniform interface for different underlying controller frameworks
Questions, reactions?

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