

# **Semantic Addressing and Routing Impact on Future Networks**



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Inovação



- WHY
   WHAT
   WHO
  - WHEN
    - •
  - WHERE
    - •
    - •





- WHY
  - We not not care about network addresses
  - We need to abstract "what we care" from what we use to deliver
- WHAT
  - We cannot escape infrastructure and IP is now infrastructure
  - Semantic routing is a (the?) path to isolate that infrastructure detail from the end consumption of the infrastructure products
  - In a mobile world...
- WHO
  - The simplest answer: infrastructure providers/service providers
- WHEN
  - Legacy, legacy, legacy, legacy
- WHERE
  - Do we want to have a routed infrastructure?
  - SDN, C-RAN, MEC





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Semantic solutions need to link with service (what is this) delivery

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intrinsicly support mobility

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Only cost-efficient solutions will survive. Only extremely cost-efficient solutions will be widespread









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Solve the previous one first!
Or disrupt the global network into multiple networks

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We can have a "control interface" (broker, orchestrator, etc...) for semantic translation(s)





#### Semantic and future networks

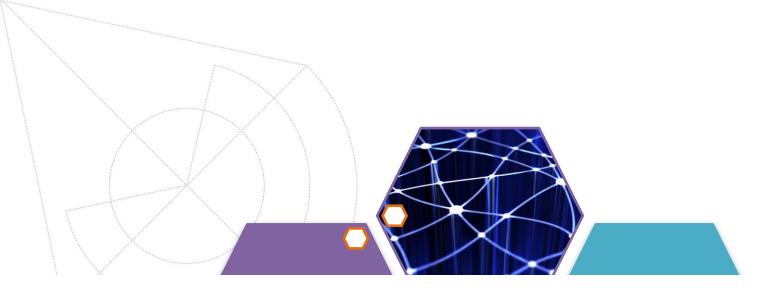
- WHY
  - Semantic approaches need to provide optimizes solutions for
  - wdifferent types of services, including the inherent mobility
- WHArequirements for many of them

  - We cannot escape infrastructure and IP is now infrastructure

    Focused solutions may be successful, but will fail to transform the prinetwork. Only cost-efficient solutions, and in particular solutions
  - that will simplify OPEX for multiple types of services will be
- WHowidespread.
  - The simplest answer: infrastructure providers/service providers
- WHETransition trends towards centralized environments, with the ability
  - Letoprovideeslicedeviews of networks (effectively different networks),
- WHEmay allow the appearance of a new type of abstraction, where
  - Darouting doses its dominance, and service interfacing may be
  - sisemantically related











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