

# *Fixed–mobile convergence*

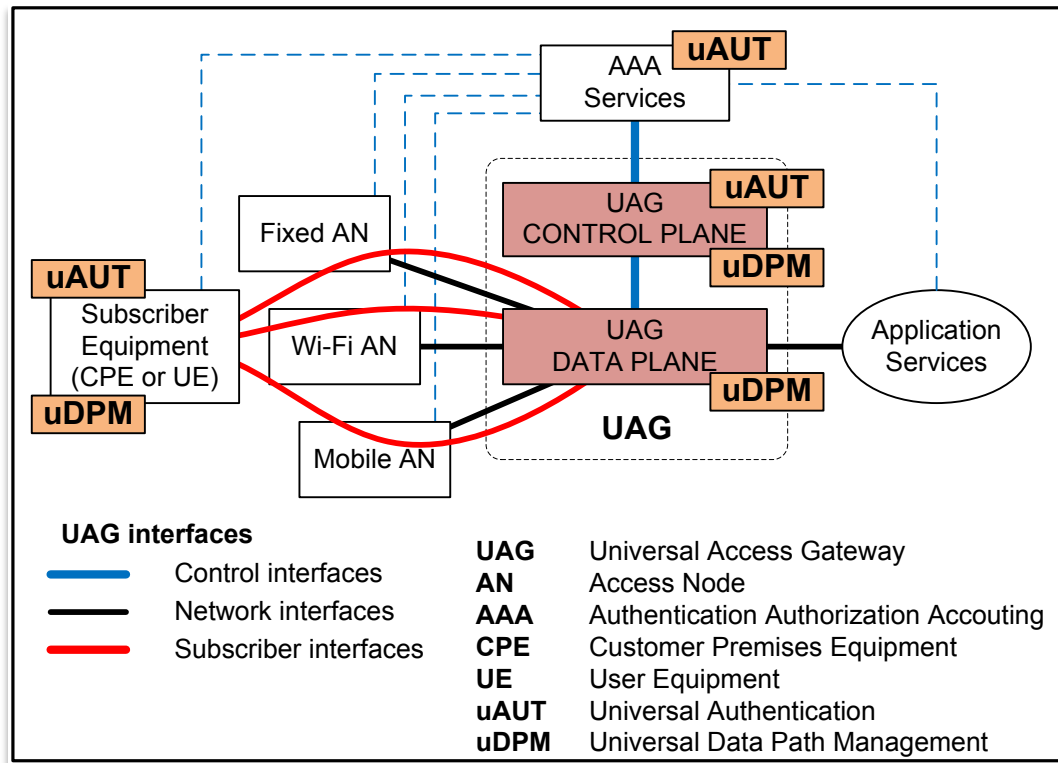
## *Functional convergence*

# *The Universal Access Gateway concept*

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# Definition of a “Universal Access Gateway”



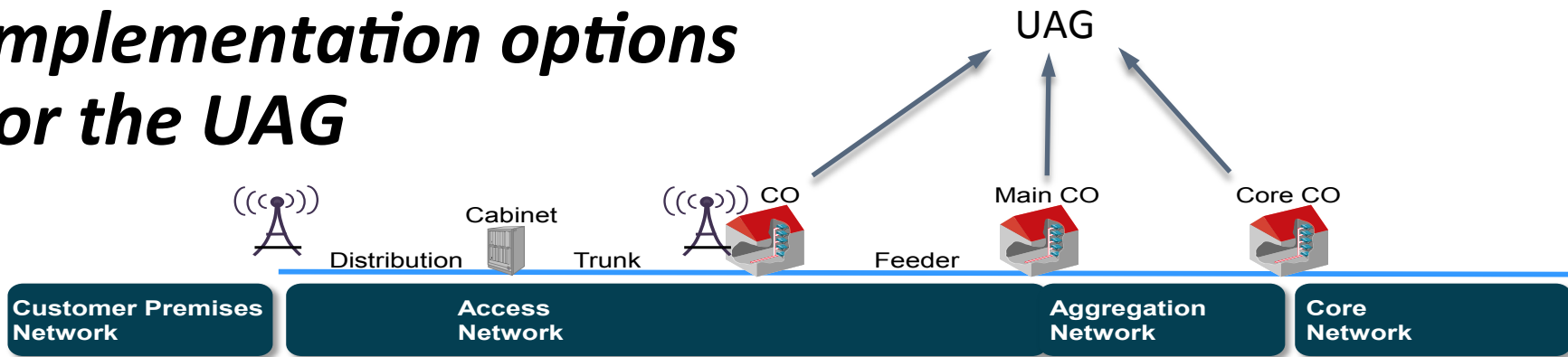
UAG’s data plane is IP edge for all access networks

- it includes a SGW/PGW for mobile traffic
- It includes the BNG for fixed traffic
- it may include a MPE (with MPTCP)
- it may interface with content caches

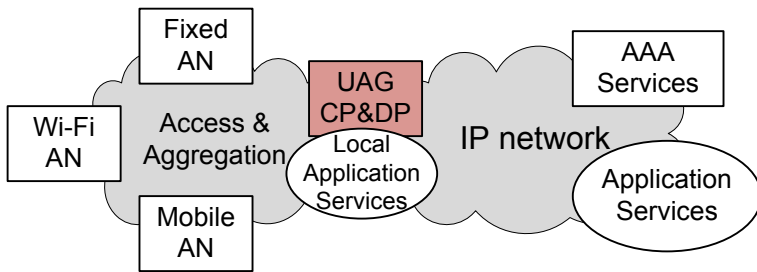
UAG’s control plane

- Interfaces with the uAUT
- Includes the MME
- Includes security and policy control
- May interface with content distribution functions

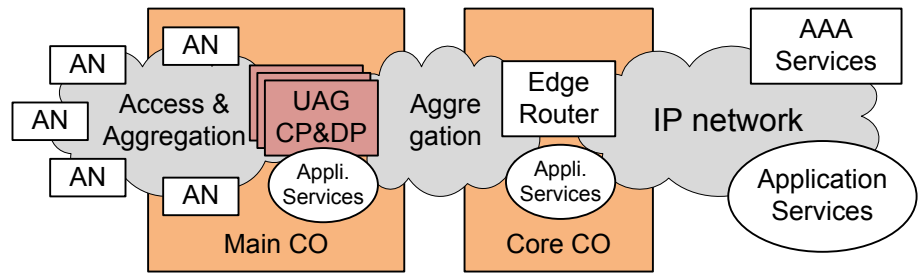
# Implementation options for the UAG



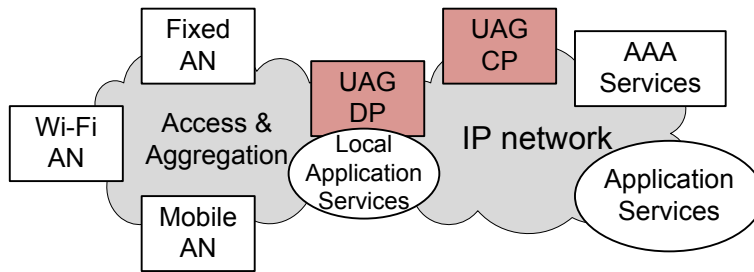
Several options for locating: data plane UAG, control plane UAG  
Enablers are SDN and NFV



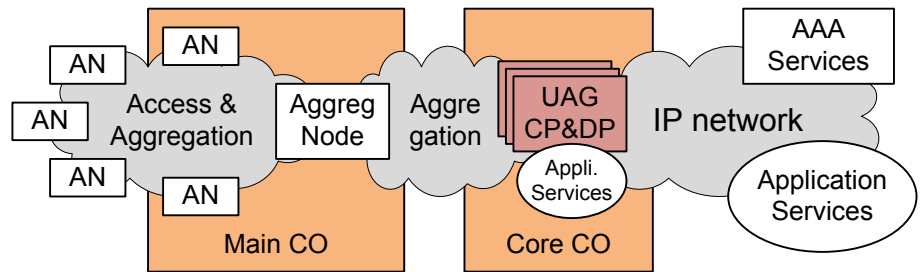
**Standalone UAG** (i.e., without CP/DP separation)



**Distributed standalone UAG**



**Splitted UAG** (i.e., with CP/DP separation)



**Centralized standalone UAG**

# *Functional Convergence Summary*

- FMC: global control of multiple data paths
  - Multiplicity of access modes
  - Multiplicity due to mobility
  - Multiplicity due to replication of content within the network
- Two functional blocks provide a holistic control for FMC
  - uAUT allows to bind multiple traffic flows to a given user, over all available accesses
  - uDPM allows to control how the user's traffic flows are dispatched over the available data paths
- The UAG is a functional element that (partially) implements uAUT and uDPM
- There are multiple implementation options for the UAG
  - Standalone equipment versus split data/control plane (SDN)
  - Distributed versus centralised implementations

## *Presented by*

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