



Mobile Traffic Steering

draft-liebsch-dmm-mts-00.txt

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...in discussion with others

IETF#120 – Vancouver, Canada

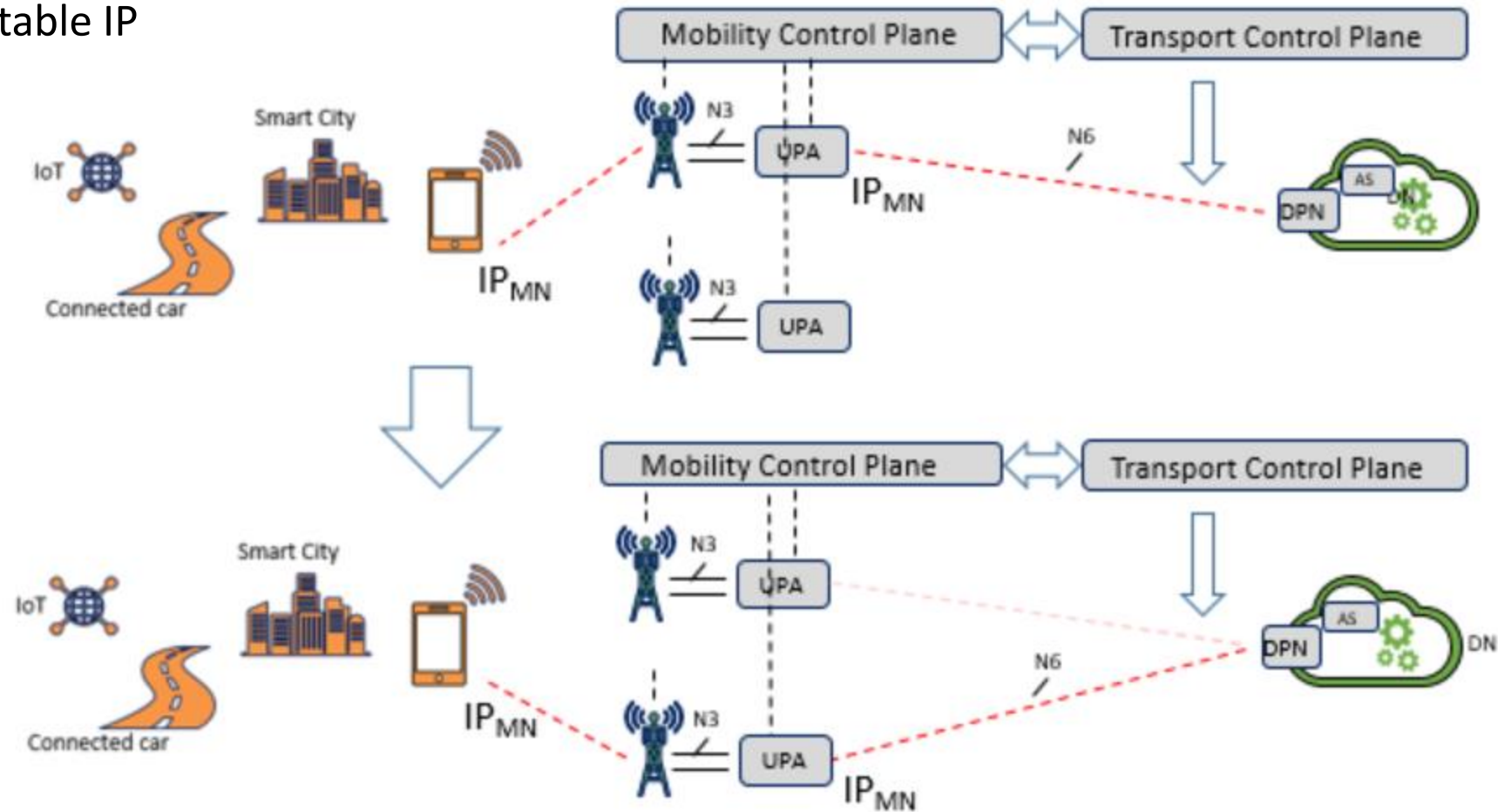
23rd July 2024

Topic Background & past activity

- Mobile traffic steering in advanced mobile scenarios discussed @ IETF116
 - Applicable solution drafts from past DMM activity summarized
- Room for documentation & standardization further elaborated
- Discussion in between IETF116 and IETF117
- Public side meeting @IETF117, resulting in...
 - Set of good use cases
 - Fair comments about applicability and limitations
 - List of challenges and topics to look at
 - Converged on value and scope of documentation
- Growing interest

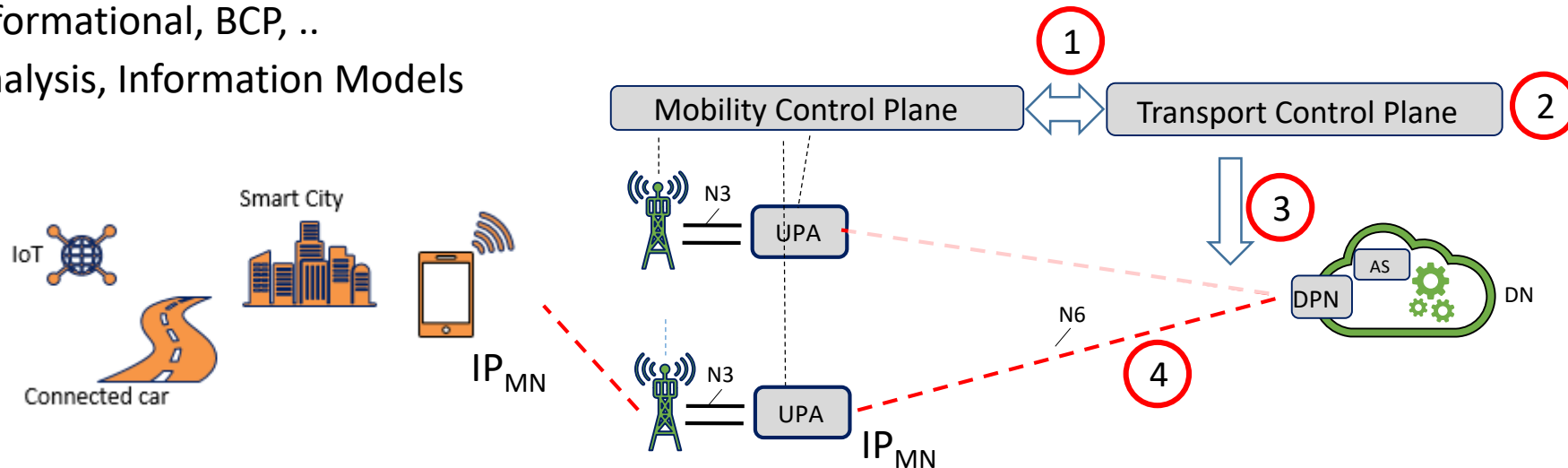
Basic scenario

- IP address continuity by de-coupling of a mobile node's IP address from a topologically matching User Plane Anchor (UPA)
- Traffic steering of non-routable IP
- Network Function ephemerality / mobility



Past Discussion & Status

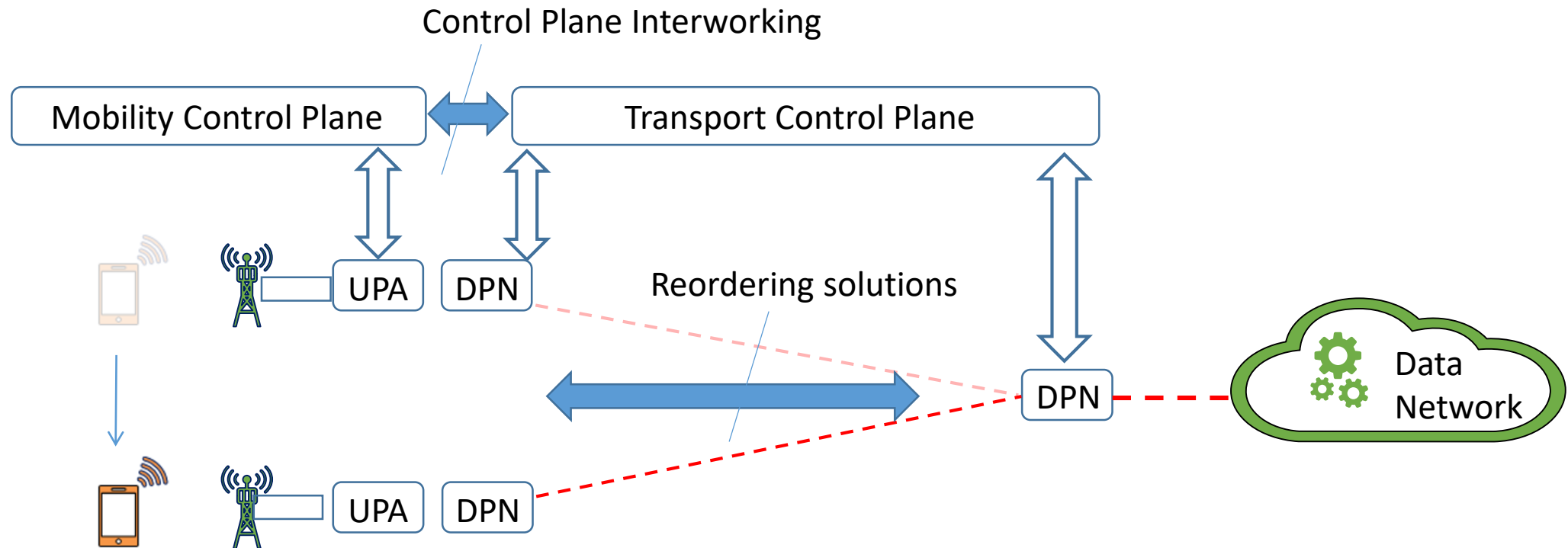
- Interest in such work ? ✓
- Value and relevance of such work ? ✓
- Technical scope of the work ?
 - Semantics and information model to/from Transport Control Plane ① ✓
 - Transport Control Plane ② and Control-/Data Plane interface semantics ③
 - Forwarding Plane ④ ✓
- Intended status and type ?
 - Informational, BCP, ..
 - Analysis, Information Models



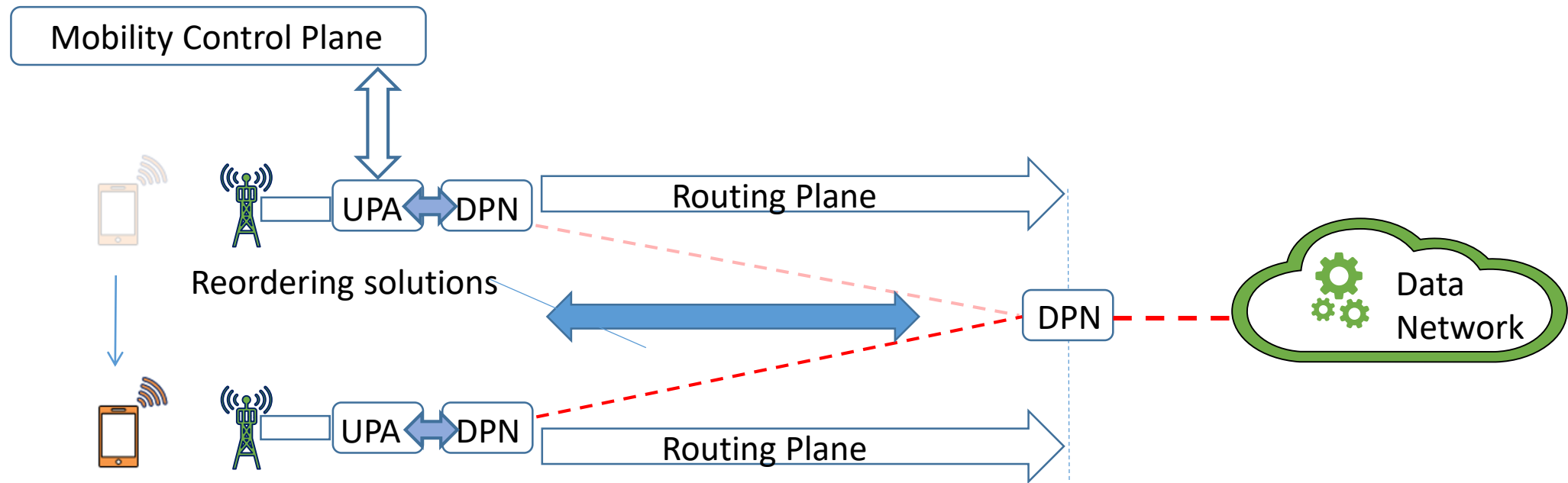
General topics that came up...

- Beyond UE mobility: Architectures with moving nodes (services, NTN, network functions) on path
- Mid-session node handover: Data plane packet re-ordering during UPF re-location
- UE-to-UE communication
- Cross-domain mobility aspects
- End-to-end QoS
- Functional Architecture representation
- 5GS specifics to complement/leverage (Application Function, UE Route Selection Policy, ..)
- Synergies with other standards groups
- ...

Deployment option – Controller-based architecture



Deployment option – Architecture with distributed routing plane



Lessons Learned & First draft

Main conclusion from discussion

- End-to-end problem statement cannot be generalized and depends on deployment details
- Potential work identified; standardization vs. carrier-specific solutions

Current work

- Architecture options
- Semantics in between transport network controller and mobility control plane / Info models
- Data Plane optimizations during path switching (re-ordering)

Starting point ...

- Documentation of reference architecture
- Documentation of (advanced) use cases
- Documentation of end-to-end architecture & deployment options
- Documentation of protocol options, semantics and info models

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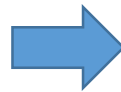
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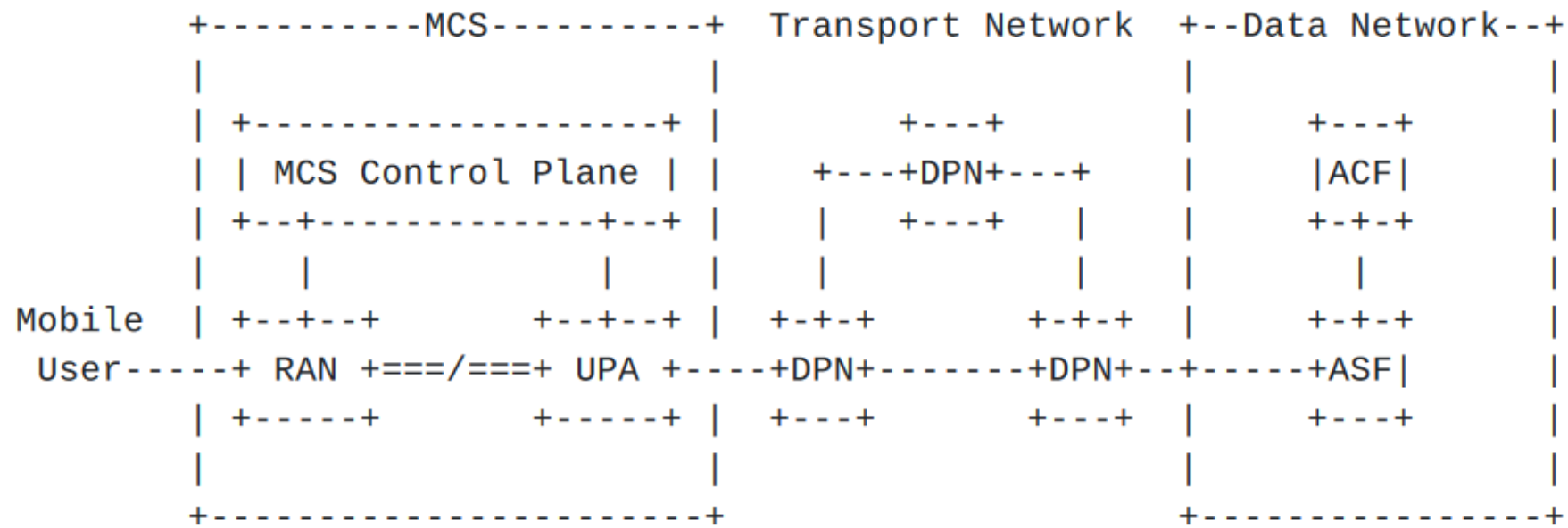


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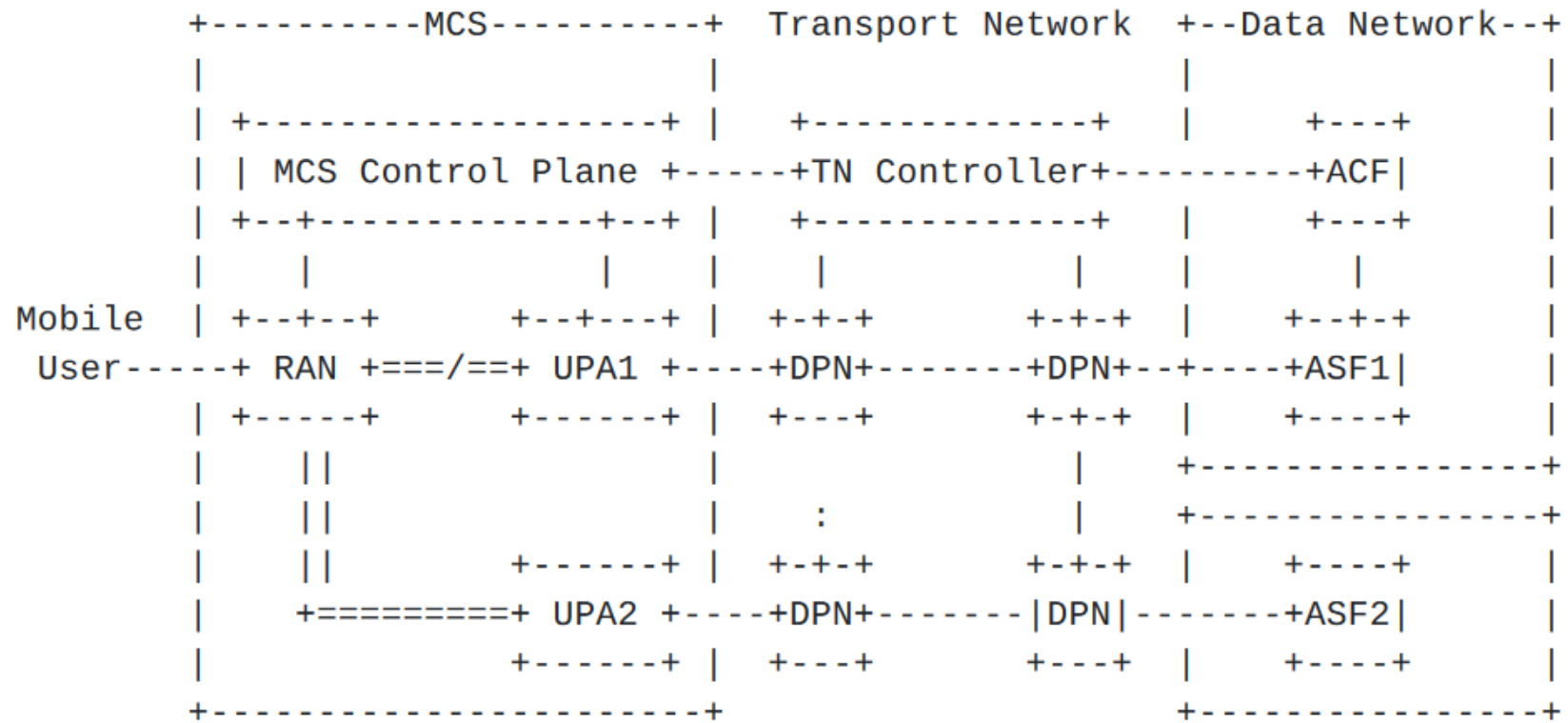
- Publish -01 in September with more details on analysis and specification
- Publish advanced version before Dublin IETF121
- Group interest ... ?

Backup Slides

Reference architecture & use cases



E2E-Architecture – Controller-based



E2E-Architecture – Distributed routing

