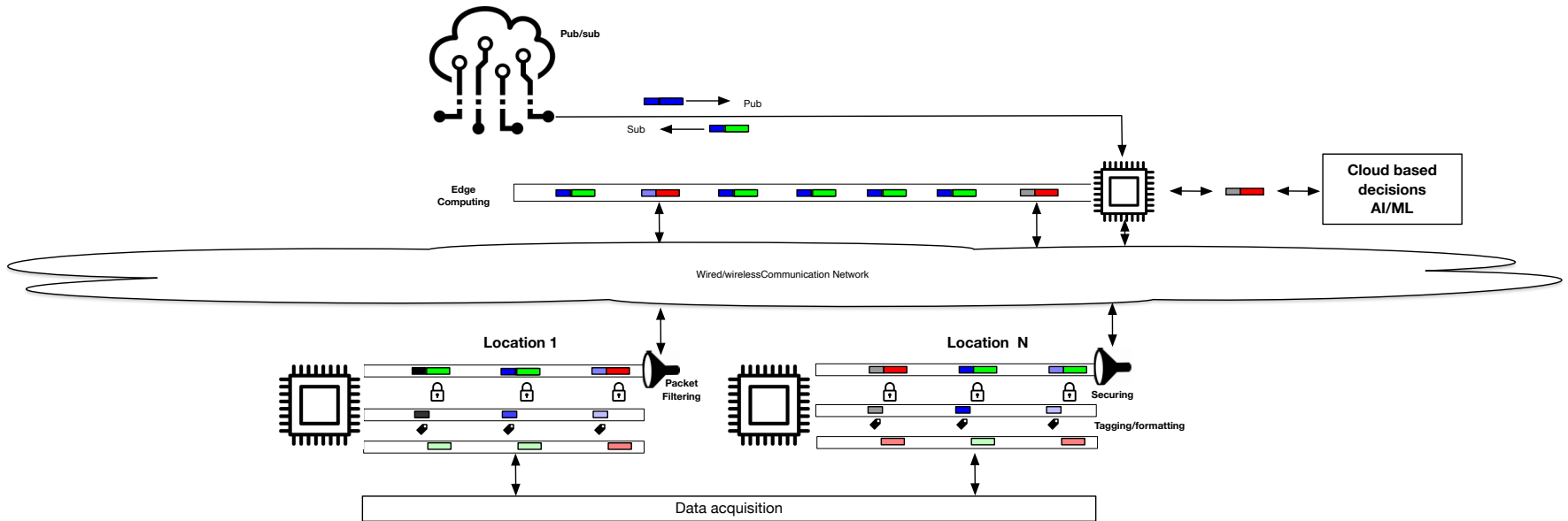


“The network is the data”

- Rise of data driven services and applications in networking and especially in IoT
- Delay sensitive or critical decision making needs to be done close to the location of data gathering or data usage
- Sophisticated AI/ML application need to combine data and functionalities at the edge not just in remote clouds
- Cloud-edge continuum and in-network computing/compute first networking architectures require local processing/coordination/orchestration
- New powerful hardware (Tofino etc.) and software abstractions available for IoT and edge computing

Proposed Architecture



Functionalities

- Data layer functions
 - Filtering and match/action on headers and metadata
 - Managing pub-sub
 - Service/data/function discovery
 - Orchestration
 - Cache management (size/staleness)
 - Local processing using generic and dedicated hardware
 - Local decision making (based on the above)
 - Networking (local and remote)
- Links to other initiatives
 - ICN/NDN
 - Distributed networks
 - AI in networking/NM
 - Discovery
 - Compute-First Networking
 - “Intelligence market” (Ericsson Research)
 - Semantic Web

Next steps

- Continue developing the architecture and define specific services
- Develop/link to use cases
 - Automotive
 - Agriculture 4.0
 - Next generation IoT in industry
 - Etc.
- Propose solutions
- Prepare a draft for IETF 109



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