SIMECA: SDN-based IoT Mobile Edge Cloud Architecture
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Limitations of current LTE/EPC architecture in supporting IoT

1. **Inflexibility in deploying new IoT services:**
   - The network is proprietary and closed to service providers.

2. **Centralized deployment of core network functions:**
   - Specialized and hardware-based equipment (SPGW, MME, PCRF) deployed in a limited physical locations.

3. **Heavy-weight data and control plane for IoT traffic:**
   - GTP tunnels add data plane overhead.
   - Maintaining GTP tunnels incurs control plane signaling.

Proposed mobile edge cloud architecture for IoT services

1. **Multiple IoT service providers share an infrastructure.**
   - IoT network service abstraction (ISA) realized by NFV, SDN, and cloud.

2. **More distributed architecture: mobile edge network and cloud.**
   - NFV mobility functions and cloud deployed close to the edge, SDN-based forwarding.

3. **Light-weight data and control plane for IoT devices.**
   - Remove GTP tunnels, SDN-based path implementation.

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**References**