3GPP TSG-SA WG1 eMeeting #97-e
E-meeting, 14th – 24th February 2022

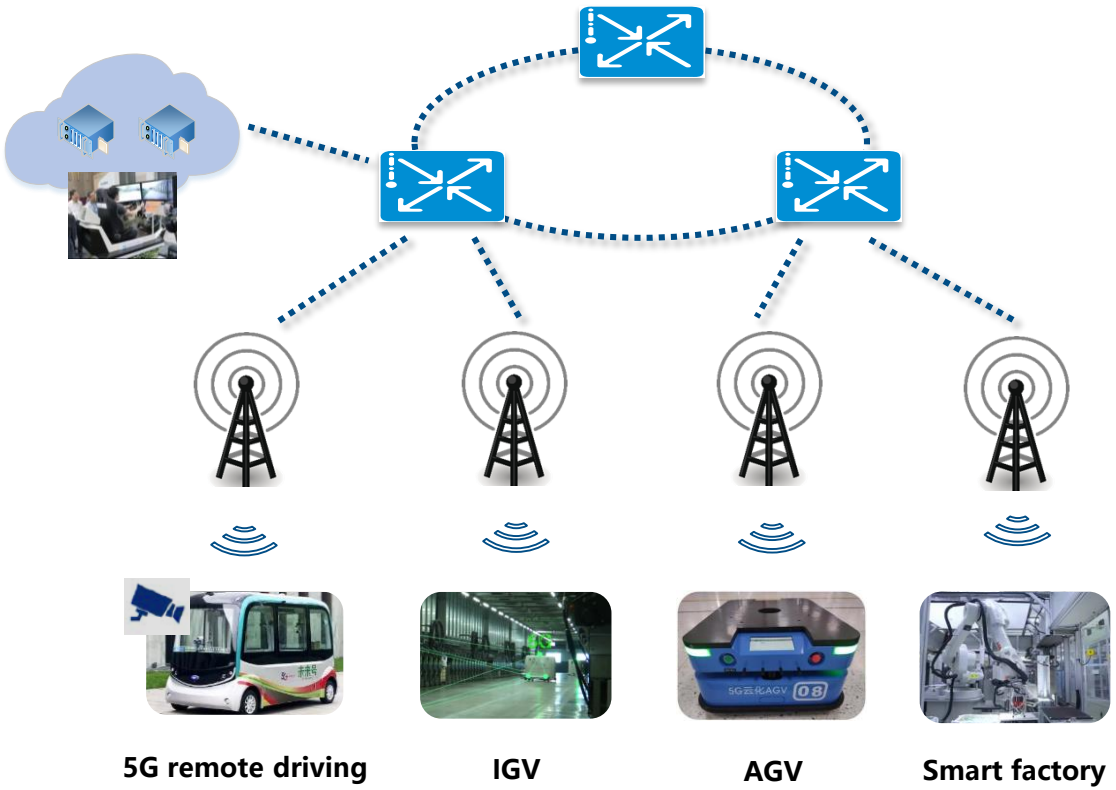
S1-22xxxx

Discussion Paper of 5G Enabled Distributed Data Management

ZTE Corporation

Motivation

--5G enabled Distributed Data Management



5G enabled DDM

✓ **Distributed data storage**

- New development trend
- Avoid data monopoly

✓ **Real-time trustworthy data collection and sharing**

- Data collection with higher frequency: millisecond even up to sub-millisecond
- Data sharing among multiple service subscribers: trustworthy sharing
- Distributed data collection used for network intelligence

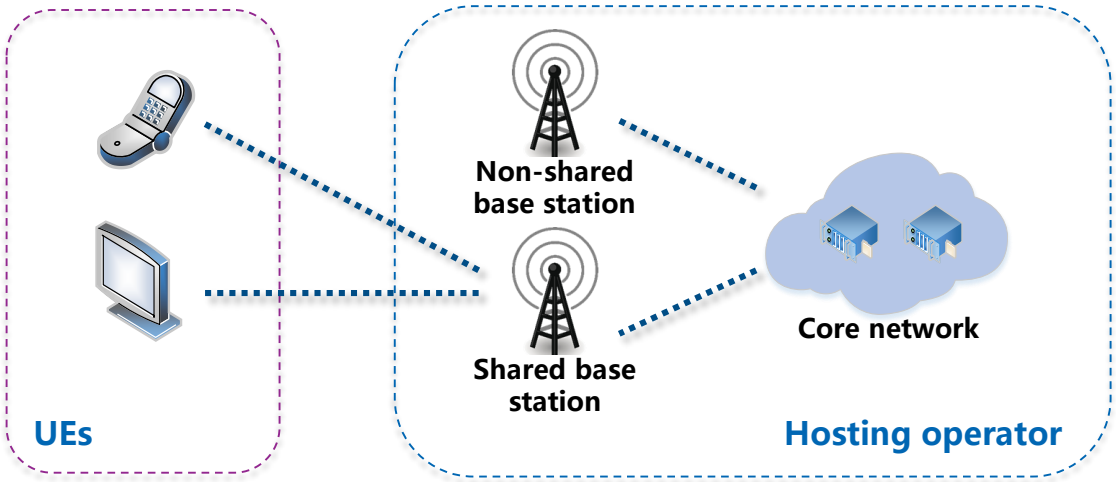
✓ **Data collection type**

- Wireless communication network related data
- Key IoT/V2X data from end equipments

ZTE

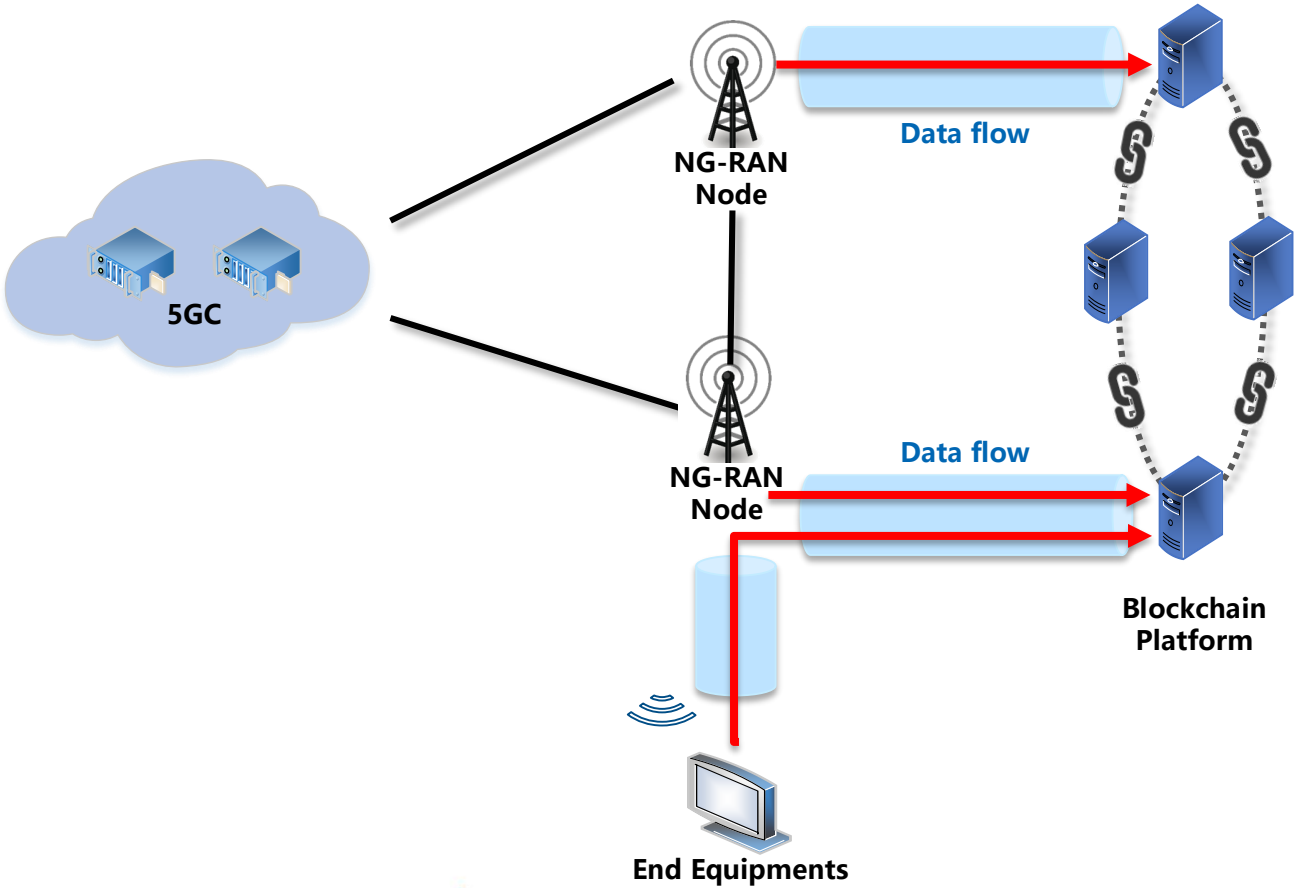
Motivation

--Trustworthy Data Sharing enabled by RAN node



- Sharing data between participating and hosting operators, e.g. real-time millisecond-level cell load information and sub-millisecond-level latency of URLLC services
- A neutral platform is expected to support traceable data viewing, immutable data storage and trusted point-to-point transmission for operators to achieve trustworthy data sharing

Service flow Example



Objective

- The objective of this technical report is to study use cases and identify potential requirements for 5G enabled distributed data management:
- It includes but is not limited to:
  - Use cases related with 5G distributed data management:
    - ✓ Distributed data storage scenarios e.g. smart factory, ITS, V2X, network sharing etc.
    - ✓ Real-time data collection and multiple data sources.
    - ✓ Trustworthy data sharing supported by RAN node.
  - Potential requirements to enable distributed data storage, real-time trustworthy data collection and sharing. The collected data includes wireless network related measurements, and key IoT/V2X data from related end equipments to RAN nodes.