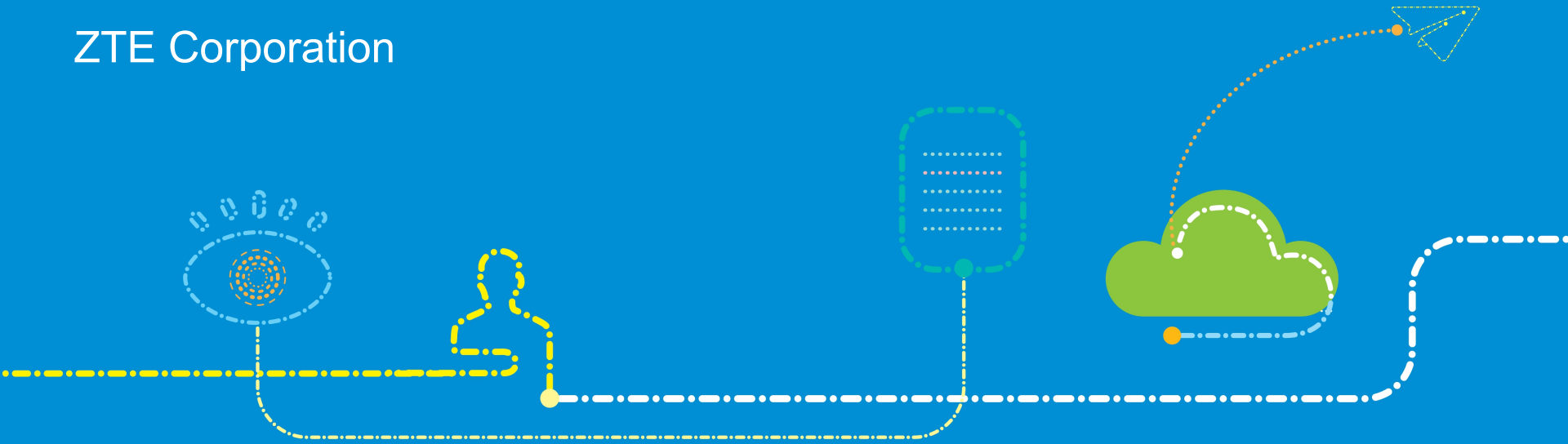
3GPP TSG-SA WG1 eMeeting #98-e
E-meeting, 09th – 19th May 2022

S1-221021

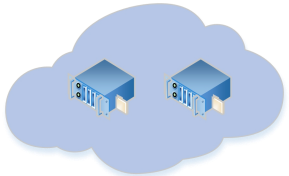
Discussion Paper of Measurement Data Collection and Integrity

ZTE Corporation



Motivation --Real-time QoS monitoring

Robotic arm

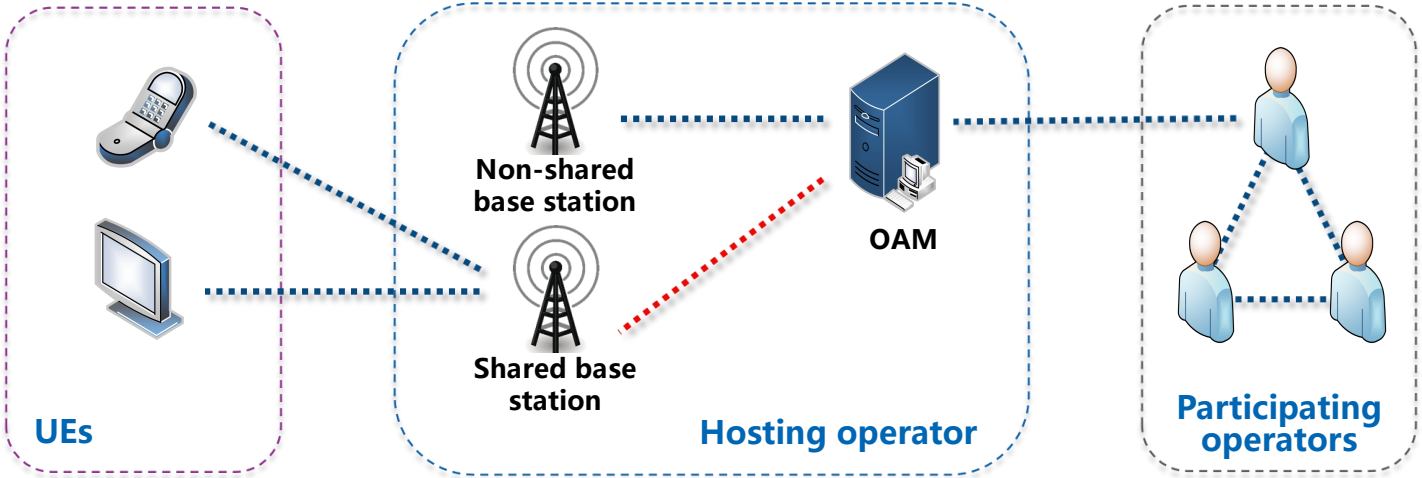


CN/OAM

Smart factory control center

- 5G based motion control is a typical use case in factory automation, which has stringent requirements in latency, service availability and reliability as specified in TS22.104
- High refresh rate QoS monitoring is required to assist the remote motion controller to monitor real-time communication service quality

Motivation -- Network measurement data integrity



- Network measurement data integrity shall be ensured after data being collected by the 5G NG-RAN nodes and before being shared via the OAM since the data needs to be further shared between hosting and participating operators

Gap Analysis --Measurement Data Collection and Integrity

Existing 5G system

✓ **QoS monitoring**

- Real-time QoS monitoring with one update per second, which can't support real-time QoS monitoring for ultra low latency (e.g. 500μs)

✓ **Data integrity**

- The integrity for network measurement data has not been studied especially for RAN sharing scenario

5G enabled MDataCI

✓ **Real-time network measurement data colletion**

- Network measurement data collection with higher refresh rate: higher than one measurement per second or above

✓ **Network measurement data integrity**

- Network measurement data integrity is ensured to be visited by multiple operators especially for RAN sharing scenario

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Objective

- The objective of this study is to analyze use cases and identify potential requirements for network measurement data collection with high refresh rate to improve QoS monitoring and integrity of network measurement data.
- The following will be studied:
  - Support of high refresh rate network measurement data collection for specific verticals or enterprise customers to assess communication service performance.
  - Identify high refresh rate network measurement data collected by 5G NG-RAN nodes and/or UEs (i.e., real-time load information, real-time service quality related measurements) considering RAN sharing scenarios and/or different vertical industry scenarios which have stringent communication service performance requirements.
  - Support of network measurement data integrity necessary for reliable measurement in heterogeneous cooperating environment such as the RAN sharing.
  - Gap analysis between identified potential new requirements and already specified for the 5G system.

Thank you

Tomorrow never waits