**3GPP TSG-SA5 Meeting #132e *S5-204263***

**e-meeting 17th 28th August 2020**

**Source: Huawei**

**Title: pCR TS 28.313 Corrections of D-SON Procedure**

**Document for: Approval**

**Agenda Item: 6.4.4**

# 1 Decision/action requested

***The group is asked to discuss and approve the proposals.***

# 2 References

# 3 Rationale

This contribution proposes to update Clause 8.2 with some discriptions include getting the status of the control of SON function before setting the operations, to make the D-SON procedure more clear.

# 4 Detailed proposal

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| **1st modified section** |

## 8.2 Distributed SON management

### 8.2.1 RACH Optimization (Random Access Optimisation)

Figure 8.2.1-1 depicts a procedure that describes how D-SON management function can manage the RACH optimization (D-SON) function. It is assumed that the D-SON management function has consumed the performance assurance management service to collect RACH optimisation related measurements.



Figure 8.2.1-1: RACH Optimization procedure

1. The D-SON management function consumes the provisioning MnS with *modifyMOIAttributes* operation (see clause 5.1.3 in TS 28.532 [3]) to configure the targets for RACH optimization function.

1.a The provisioning MnS sets the targets for RACH optimization (D-SON) function (NOTE).

2. The D-SON management function consumes the provisioning MnS with *modifyMOIAttributes* operation to enable the RACH optimization function for a given NR cell if it is not enabled.

3.a The provisioning MnS enables the RACH optimization (D-SON) function (NOTE).

3. The RACH optimization (D-SON) function receives the RACH information report from UE(s), and analyses them to determine the actions to optimize the RACH performance if the performance does not meet the targets by updating the RACH parameters.

4. The D-SON management function collects the RACH related performance measurements.

5. The D-SON management function analyses the measurements to evaluate the RACH performance,

6. The D-SON management function consumes the provisioning MnS with *modifyMOIAttributes* operation to update the targets of the RACH optimization function, when the RACH optimization performance does not meet the targets:

6.a The provisioning MnS updates the targets for RACH optimization function (NOTE).

NOTE: The interface between provisioning MnS and RACH optimization is not subject to standardization.

### 8.2.2 MRO (Mobility Robustness Optimisation)

Figure 8.2.2-1 depicts a procedure that describes how D-SON management function can manage the MRO function. It is assumed that the D-SON management function has consumed the performance assurance MnS to create PM jobs to collect handover related measurements.



Figure 8.2.2-1: MRO procedure

1. The D-SON management function consumes the provisioning MnS with *modifyMOIAttributes* operation (see clause 5.1.3 in TS 28.532 [3]) to configure targets for the MRO function.

1.a The provisioning MnS sets the targets for MRO function (NOTE).

2. The MRO management function consumes the management service for NF provisioning with *modifyMOIAttributes* operation to configure the ranges of handover parameters.

2.a The MnS of provisioning sets the ranges for MRO function (NOTE).

3. The MRO management function consumes the management service for NF provisioning with *modifyMOIAttributes* operation to configure the MRO control parameters (e.g. Maximum deviation of Handover Trigger, Minimum time between Handover Trigger changes).

3.a The MnS of provisioning sets the MRO control parameters for MRO function (NOTE).

4. The D-SON management function consumes the NF provisioning MnS with *modifyMOIAttributes* operation to enable the MRO function for a given NR cell if it is not enabled.

4.a The provisioning MnS enables the MRO function (NOTE).

5. The MRO function receives MRO information reports from UE(s), and analyses them to determine the actions to optimize the MRO performance. fI the performance does not meet the targets, it updates the handover parameters.

6. The D-SON management function collects MRO related performance measurements.

7. The D-SON management function analyses the measurements to evaluate the MRO performance,

8. The D-SON management function performs one of the following actions, when the MRO performance does not meet the targets:

8.1. Consume the MnS of provisioning with *modifyMOIAttributes* operation to update the targets of the MRO function;

8.1.a The MnS of provisioning updates the targets for MRO function (NOTE).

8.2. Consume the MnS of provisioning with *modifyMOIAttributes* operation to update the ranges of the handover parameters;

8.2.a The MnS of provisioning updates the ranges of the handover parameters (NOTE).

8.3. Consume the MnS of provisioning with *modifyMOIAttributes* operation to update the control parameters;

8.3.a The MnS of provisioning updates the control parameters (NOTE).

NOTE: The interface between provisioning MnS and MRO function is not subject to standardization.

### 8.2.3 PCI configuration

#### 8.2.3.1 Initial PCI configuration

Figure 8.2.3.1-1 depicts a procedure that describes how D-SON management function can manage the PCI configuration (D-SON) function to assign the PCI values to NR cells the first time.



Figure 8.2.3.1-1: Initial PCI configuration procedure

1. The D-SON management function consumes the MnS of NF provisioning with *modifyMOIAttributes* operation to configure the PCI list for NR cell(s).

1.a The MnS of provisioning sets the PCI list at the PCI configuration (D-SON) function (NOTE)

2. The D-SON management function consumes the MnS of NF provisioning with *modifyMOIAttributes* operation to enable the PCI configuration function for NR cell(s) if it is not enabled.

2.a The MnS of provisioning enables the PCI configuration (D-SON) function (NOTE).

3. The PCI configuration (D-SON) function selects PCI value(s) from the PCI list.

4. The PCI configuration (D-SON) function reports the PCI value(s) being assigned to the MnS of NF provisioning.

5. The MnS of NF provisioning sends a notification *notifyMOIAttributeValueChange* to D-SON management function to indicate the PCI value(s) being assigned to NR cell(s).

NOTE: The interface between MnS of NF provisioning and PCI configuration (D-SON) function is not subject to standardization.

#### 8.2.3.2 PCI re-configuration

Figure 8.2.3.2-1 depicts a procedure that describes how D-SON management function can re-configure the PCI list for NR cell(s) when PCI collision or PCI confusion issues were detected.



Figure 8.2.3.2-1: PCI re-configuration procedure

1. The PCI configuration (D-SON) function detects and reports the PCI collision or PCI confusion problems for NR cell(s) to MnS of fault supervision (NOTE).

2. The producer of fault supervision MnS sends a notification *notifyNewAlarm* to D-SON management function to report the PCI collision or PCI confusion problems detected on NR cell(s).

3. The D-SON management function consumes the MnS of NF provisioning with *modifyMOIAttributes* operation to re-configure the PCI list for NR cell(s).

3.a The MnS of NF provisioning re-configures the PCI list for NR cell(s) (NOTE).

4. The PCI configuration (D-SON) function selects PCI value(s) from the updated PCI list.

5. The PCI configuration (D-SON) function reports the PCI value(s) being assigned to the MnS of NF provisioning.

6. The MnS of NF provisioning sends a notification *notifyMOIAttributeValueChange* to D-SON management function to indicate the PCI value(s) being assigned to NR cell(s).

7. The PCI configuration (D-SON) function notifies MnS of fault supervision that the PCI collision or PCI confusion problems have been respoved (NOTE).

8. The producer of fault supervision MnS sends a notification *notifyClearedAlarm* to D-SON management function to report the PCI collision or PCI confusion problems being resolved.

NOTE: The interface between MnS of NF provisioning and PCI configuration (D-SON) function is not subject to standardization.

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| **End of modified section** |