**3GPP TSG-RAN3 Meeting #127bis** **R3-252408**

**Wuhan, China, Feb 07-11, 2025**

**Agenda Item:** 14.3

**Source:** Qualcomm Incorporated, Nokia, Nokia Shanghai Bell, Xiaomi, China Telecom, CATT, Samsung, ZTE Corporation, LG Electronics

**Title:** (TP to BL CR for TS 38.300) Enhancement to support hard FLSO

**Document for:**Discussion/Decision

# Introduction

This is a TP to TS 38.300 to suspend/resume the downlink NG transmission before/after hard FLSO for NR NTN Regenerative Payload.

# TP for TS 38.300

16.14.4 Switchover

16.14.4.1 Definitions

A feeder link switchover is the procedure where the feeder link is changed from a source NTN Gateway to a target NTN Gateway for a specific NTN payload. The feeder link switchover is a Transport Network Layer procedure. Service link switch refers to a change of the serving NTN payload.

Both hard and soft feeder link switchover are supported in NTN.

16.14.4.2 Assumptions

A feeder link switch over may result in transferring the established connection for the affected UEs between two gNBs.

For soft feeder link switch over, an NTN payload is able to connect to more than one NTN Gateway during a given period, i.e. a temporary overlap can be ensured during the transition between the feeder links.

For hard feeder link switch over, an NTN payload connects to only one NTN Gateway at any given time, i.e. a radio link interruption and/or NG link interruption may occur during the transition between the feeder links.

16.14.4.3 Procedures

The NTN Control function (see Annex B.4) determines the point in time when the feeder link switch over between two gNBs is performed. The transfer of the affected UE(s)' context between the two gNBs at feeder link switch over is performed by means of either NG based or Xn based handover, and it depends on the gNBs' implementation and configuration information provided to the gNBs by the NTN Control function.

For Regenerative payload, an indication to suspend and resume data and signaling procedures over NG interface is sent to AMF from gNB in the NGAP Configuration Update message when the Hard Feeder Link switch occurs.

Editor’s Note: FFS whether this text is needed.