B5G_UE - 错误 #4438

TA动态调整测试，TA从PHY下发到平台失败

2025-11-14 08:48 - 白 瑞朋

状态:	进行中	**开始日期:**	2025-11-14
优先级:	一般	**计划完成日期:**	
指派给:	白 瑞朋	**% 完成:**	0%
类别:		**预期时间:**	0.00 小时
目标版本:		**耗时:**	0.00 小时

描述

【问题描述】
Uu口 TA动态调整，PHY收到协议栈下发的Timing advance值，写平台buffer失败。

历史记录

#1 - 2025-11-14 08:49 - 白 瑞朋

- 状态 从 新建 变更为 进行中

【问题跟踪】
PHY收到协议栈下发的Timing advance值，写平台FIFO buffer失败。

#2 - 2025-11-14 17:38 - 白 瑞朋

- 文件 38.321.jpg 已添加

38213
4.2 Transmission timing adjustments

not expected to transmit a PUSCH/SRS/PUCCH in one CG when the PUSCH/SRS/PUCCH is overlapping in time, even partially, with random access preamble transmitted in another CG.

For a SCS of $2^{\mu} \cdot 15$ kHz, the timing advance command for a TAG indicates the change of the uplink timing relative to the current uplink timing for the TAG in multiples of $16 \cdot 64 \cdot T_c / 2^{\mu}$. The start timing of the random access preamble is described in [4, TS 38.211].

A timing advance command [11, TS 38.321] in case of random access response or in an absolute timing advance command MAC CE or in a cell switch command, T_A, for a TAG indicates N_{TA} values by index values of $T_A = 0, 1, 2, ..., 3846$, where an amount of the time alignment for the TAG with SCS of $2^{\mu} \cdot 15$ kHz is $N_{TA} = T_A \cdot 16 \cdot 64/2^{\mu}$. N_{TA} is defined in [4, TS 38.211] and is relative to the SCS of the first uplink transmission from the UE after the reception of the random access response or absolute timing advance command MAC CE or the cell switch command.

In other cases, a timing advance command [11, TS 38.321], T_A, for a TAG indicates adjustment of a current N_{TA} value, N_{TA_old}, to the new N_{TA} value, N_{TA_new}, by index values of $T_A = 0, 1, 2, ..., 63$, where for a SCS of $2^{\mu} \cdot 15$ kHz, $N_{TA\_new} = N_{TA\_old} + (T_A - 31) \cdot 16 \cdot 64/2^{\mu}$.

If a UE has multiple active UL BWPs, as described in clause 12, in a same TAG, including UL BWPs in two UL carriers of a serving cell, the timing advance command value is relative to the largest SCS of the multiple active UL

#3 - 2025-11-14 19:19 - 白 瑞朋

- 文件 sample=256.png 已添加

- 文件 sample=96.png 已添加

初始"uldelay": 1000,
RAR sample 调整值是256

```
[ERR]Recv TA Req: type:0 dir[0] taValue[8]
[INFO]set TA 1901:256 according RAR
[INFO]3.11 UU TA sample=256 len=0xc ret=0
[INFO]xmLteRecvTaReq: MAC_CE, taType[1] taValue[8]
 [ERR]Recv TA Req: type:1 dir[0] taValue[8]
```

初始"uldelay": 2000,
RAR sample 调整值是96

```
28  [INFO]msg3:RNTI:17039, bwpSize:273, mcs:8
29  [INFO]Llc MSG3 PENDING sfn:91 curslot:13 ta[3]
30  [ERR]Recv TA Req: type:0 dir[0] taValue[3]
31  [INFO]set TA 1901:96 according RAR
32  [INFO]3.11 00 TA sample=96 len=0xc rec=0
33  [INFO]send Msg3 sfn:92, slot:1
```

#4 - 2025-11-17 18:00 - 白 瑞朋

接口PHY-plat

BIT6：相对TA.
PHY算出TA对应的TA_sample值，传给平台；由平台在上次TA基础上，根据direction方向进行动态调整。

BIT11:绝对TA.
1) PHY算出TA对应的TA_sample值，减去上次的TA_old，得到TA_offset;
2) 把TA_offset传给平台；
3）平台在TA_old基础上+TA_offset，得到最后的TA_sample值。

#5 - 2025-11-17 18:01 - 白 瑞朋

测试通过，代码已提交。

分支：bugfixed_20251111
SHA-1: f83b37cc6efb245430eb02e82df3e4b38b77630d

文件

38.321.jpg	308 KB	2025-11-14	白 瑞朋
sample=256.png	34.9 KB	2025-11-14	白 瑞朋
sample=96.png	36.7 KB	2025-11-14	白 瑞朋