

B5G_UE - 错误 #3821

UU口PUU口PDC

DCI1_1的slot号，与基站侧下发的DCI1_1的slot不同，导致L1c计算的PUH上报时机与基站接收时机不一致

2025-07-28 16:52 - 王金伏

状态:	进行中	开始日期:	2025-07-28
优先级:	普通	计划完成日期:	
指派给:	王金伏	% 完成:	80%
类别:		预期时间:	0.00 小时
目标版本:		耗时:	0.00 小时
描述			

历史记录

#1 - 2025-07-28 17:02 - 王金伏

- 文件 20250728-165532.jpg 已添加
- 文件 20250728-165635.jpg 已添加
- 文件 20250728-165723.jpg 已添加
- 文件 20250728-170231.jpg 已添加
- 文件 20250728-170243.jpg 已添加
- 状态从 新建 变更为 进行中

【问题描述】UU口PUU口PDC DCI1_1的slot号，与基站侧下发的DCI1_1的slot不同，导致L1c计算的PUC上报时机与基站接收时机不一致。

PDC中计算DCI1_1是slot号用到是设备当前的slot号，不是接口带的空口slot。在L1C中计算上报PUC的时机取决于PDC，PUC上报slot = DCI1_1_slot+k1+k0。

```
1918:
1919: int32_t phy_gue_dl_pdcch_func(
1920:     //pdccCalcParam_t *pdcc_calc_param_ptr,
1921:     //interface_deofdm_pucch_t *deofdm_param_ptr,
1922:     PdcchCalcParam_t *pdcc_calc_param_ptr,
1923:     int32_t *pdccch_malloc_dm0_ptr,
1924:     int32_t *pdccch_malloc_dm1_ptr,
1925:     int32_t *pdccch_malloc_dm2_ptr,
1926:     int32_t *pdccch_malloc_dm3_ptr
1927: )
1928: {
1929:     TRACE(SMS_PDCCH_DEBUG_CELL1_ADDR, 0, TRACE_R(SMS_PDCCH_DEBUG_CELL1_ADDR, 0) + 1);
1930:
1931:     int32_t pdccchfuncstart, pdccchfuncend;
1932:     pdccchfuncstart = GET_SFC_ENT();
1933:     uint16_t slot = get_tx_nr_slot();
1934:
1935:     LOG_ERROR_S("0728 111 pdccch_func, slot=%u\n", slot);
1936:
1937:     uint16_t sfn = get_rx_nr_sfn();
1938:     int32_t *pdccch_freqdata_ptr = NULLPTR;
1939:
1940:     uint32_t mid_value1;
1941:     uint32_t mid_value2;
1942:     uint32_t mid_value3;
1943:     uint8_t air_slot;
1944:
1945:     //PdcchDecodeParam_t *decode_param_ptr;
1946:     uint32_t *dma_src_ptr;
1947:     void *mim_ptr;
1948:     pdccch_freqdata_ptr = pdccch_malloc_dm2_ptr; //78624/4 = 19656
1949:     //decode_param_ptr = &pdccch_calc_param_ptr->decodeParam[0];
1950:
1951: #if 1
1952:     g_pdcch_freq_data_hdr_dm_ptr->symbol_num=1;
1953:     g_pdcch_freq_data_hdr_dm_ptr->rx_ant_num=1;
1954:     //g_pdcch_freq_data_hdr_dm_ptr->rx_freqdata_ptr=(uint32_t *)g_pdcch_dm3microcrgtab_ptr + g_pdcch_table_param.FREQDATA;
1955: #endif
1956: #if 1
1957:     //dma for freq data
1958:     mid_value1 = g_pdcch_freq_data_hdr_dm_ptr->symbol_num * g_pdcch_freq_data_hdr_dm_ptr->rx_ant_num * (NR_RB_SUBCARRIER_NUM * 4);
1959:     mid_value2 = g_pdcch_freq_data_hdr_dm_ptr->rx_ant_num * (NR_MAX_NUM_PRBS * NR_RB_SUBCARRIER_NUM * 4);
1960:     dma_src_ptr = g_pdcch_freq_data_hdr_dm_ptr->rx_freqdata_ptr;
1961:     air_slot = g_pdcch_freq_data_hdr_dm_ptr->slot;
1962:     // 一维 搬移总字节数
1963:     // xNumSrc: [源第一维度搬移字节数] n_prbs * (NR_RB_SUBCARRIER_NUM * 4)
1964:     // yNumSrc: [源第二维度搬移个数] num_rx_ants
1965:     // yStepSrc: [源第二维度搬移步进字节数] NR_MAX_NUM_PRBS * NR_RB_SUBCARRIER_NUM * 4
1966:     // zStepSrc: [源第二维度搬移步进字节数] mid_value2
1967:     // dataLen: [搬移总字节数] n_prbs * mid_value1
1968:
1969:     ape_cs_dma_3Dto1D_G2L_ch4ch0_simp_transfer((uint32_t)dma_src_ptr,
1970:         273 * (NR_RB_SUBCARRIER_NUM * 4),
1971:         g_pdcch_freq_data_hdr_dm_ptr->rx_ant_num,
```

终端侧的DCI1_1的slot号，

Search "0726" (220 hits in 1 file)

D:\pucch关联\0724\UU\07263\7-0-str.log (220 hits)

Log entries showing errors related to DCI1_1 slot mapping. Each line includes a line number, error type [ERR], time, and a detailed log message. A red box highlights the 'pdcchSlotIdx' field in the log messages.

基站侧DU的DCI1_1的slot号

Log entries showing successful DCI1_1 slot mappings. Each line includes a line number, time, and a detailed log message. A red box highlights the 'pdcchSlotIdx' field in the log messages.

result - 228 hits

Log entries showing successful DCI1_1 slot mappings. Each line includes a line number, time, and a detailed log message. A red box highlights the 'pdcchSlotIdx' field in the log messages.

【问题原因】怀疑是PDC应该使用接口中带的airslot作为PDC的DCI1_1的slot，目前PDC中计算DCI1_1是slot号用到是设备当前的slot号，不是接口带的空slot。

【解决方案】在环境做小版本，将PDC中计算DCI1_1是slot号用接口带的空slot。在环境验证，终端发送的pucch的slot与基站DU侧接收的slot号能对上，但是会出现PDSCCH的CRC ERR情况。

D:\pucch关联\0724\UU\07284\4-0-str.log (133 hits)

Log entries showing successful DCI1_1 slot mappings. Each line includes a line number, time, and a detailed log message. A red box highlights the 'pdcchSlotIdx' field in the log messages. Red arrows point to '1 ACK' and 'NACK' labels.

```

D:\pucsch\联通\0724\UD\0724\analog\yerr_dm_20250729112742_log (228 hits)
Line 2715010: [28/07/2025 11:31:24.152] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[5] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[2] txCnt[1] rv[0] crntTime[244 3] pdcch[243 10] pucch[243 18]
Line 2715152: [28/07/2025 11:31:24.202] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[5] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[2] txCnt[2] rv[2] crntTime[245 3] pdcch[244 11] pucch[244 18]
Line 2715267: [28/07/2025 11:31:24.210] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[5] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[1] txCnt[3] rv[3] crntTime[246 0] pdcch[245 10] pucch[245 18]
Line 2715555: [28/07/2025 11:31:24.230] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[7] imcs[5] rbStart[0] rbNum[4] tbsSize[101] Ack/Nack[1] txCnt[1] rv[0] crntTime[248 0] pdcch[247 10] pucch[247 18]
Line 2715832: [28/07/2025 11:31:24.280] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[12] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[1] txCnt[1] rv[0] crntTime[250 0] pdcch[249 10] pucch[249 18]
Line 2716387: [28/07/2025 11:31:24.290] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[11] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[1] txCnt[1] rv[0] crntTime[254 0] pdcch[253 10] pucch[253 18]
Line 2716931: [28/07/2025 11:31:24.330] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[6] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[1] rv[0] crntTime[258 0] pdcch[257 10] pucch[257 18]
Line 2717069: [28/07/2025 11:31:24.340] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[6] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[2] rv[2] crntTime[259 0] pdcch[258 11] pucch[258 18]
Line 2717240: [28/07/2025 11:31:24.351] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[6] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[3] rv[3] crntTime[260 3] pdcch[259 10] pucch[259 18]
Line 2717369: [28/07/2025 11:31:24.360] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[6] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[4] rv[4] crntTime[261 0] pdcch[260 11] pucch[260 18]
Line 2717514: [28/07/2025 11:31:24.370] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[8] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[1] rv[0] crntTime[262 0] pdcch[261 10] pucch[261 18]
Line 2717659: [28/07/2025 11:31:24.380] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[8] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[2] rv[2] crntTime[263 0] pdcch[262 11] pucch[262 18]
Line 2717811: [28/07/2025 11:31:24.391] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[8] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[3] rv[3] crntTime[264 3] pdcch[263 10] pucch[263 18]
Line 2717949: [28/07/2025 11:31:24.400] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[8] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[4] rv[4] crntTime[265 0] pdcch[264 11] pucch[264 18]
Line 2718091: [28/07/2025 11:31:24.410] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[10] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[1] rv[0] crntTime[266 0] pdcch[265 10] pucch[265 18]
Line 2718250: [28/07/2025 11:31:24.420] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[10] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[2] rv[2] crntTime[267 0] pdcch[266 11] pucch[266 18]
Line 2718411: [28/07/2025 11:31:24.431] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[10] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[3] rv[3] crntTime[268 3] pdcch[267 10] pucch[267 18]
Line 2718532: [28/07/2025 11:31:24.440] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[10] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[4] rv[4] crntTime[269 0] pdcch[268 11] pucch[268 18]
Line 2718678: [28/07/2025 11:31:24.450] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[12] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[1] rv[0] crntTime[270 0] pdcch[269 10] pucch[269 18]
Line 2718836: [28/07/2025 11:31:24.460] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[12] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[2] rv[2] crntTime[271 0] pdcch[270 11] pucch[270 18]
Line 2718988: [28/07/2025 11:31:24.470] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[12] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[3] rv[3] crntTime[272 0] pdcch[271 10] pucch[271 18]
Line 2719146: [28/07/2025 11:31:24.480] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[13] imcs[5] rbStart[0] rbNum[8] tbsSize[101] Ack/Nack[0] txCnt[1] rv[0] crntTime[272 0] pdcch[272 11] pucch[272 18]
Line 2719302: [28/07/2025 11:31:24.490] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[13] imcs[5] rbStart[0] rbNum[8] tbsSize[101] Ack/Nack[0] txCnt[2] rv[2] crntTime[273 0] pdcch[273 11] pucch[273 18]
Line 2719472: [28/07/2025 11:31:24.500] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[13] imcs[5] rbStart[0] rbNum[8] tbsSize[101] Ack/Nack[0] txCnt[3] rv[3] crntTime[274 0] pdcch[274 11] pucch[274 18]
Line 2719646: [28/07/2025 11:31:24.511] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[13] imcs[5] rbStart[0] rbNum[8] tbsSize[101] Ack/Nack[0] txCnt[4] rv[4] crntTime[275 0] pdcch[275 11] pucch[275 18]
Line 2719788: [28/07/2025 11:31:24.521] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[15] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[1] rv[0] crntTime[274 0] pdcch[274 11] pucch[274 18]
Line 2719933: [28/07/2025 11:31:24.531] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[10] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[2] txCnt[1] rv[0] crntTime[278 3] pdcch[277 10] pucch[277 18]
Line 2720053: [28/07/2025 11:31:24.540] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[10] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[2] txCnt[2] rv[2] crntTime[279 0] pdcch[278 11] pucch[278 18]
Line 2720200: [28/07/2025 11:31:24.551] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[10] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[2] txCnt[3] rv[3] crntTime[280 3] pdcch[279 10] pucch[279 18]
Line 2720362: [28/07/2025 11:31:24.561] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[10] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[2] txCnt[4] rv[4] crntTime[281 3] pdcch[280 11] pucch[280 18]
Line 2720503: [28/07/2025 11:31:24.571] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[11] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[2] txCnt[1] rv[0] crntTime[282 3] pdcch[281 10] pucch[281 18]
Line 2720623: [28/07/2025 11:31:24.580] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[11] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[2] rv[2] crntTime[283 0] pdcch[282 11] pucch[282 18]
Line 2720794: [28/07/2025 11:31:24.591] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[11] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[2] txCnt[3] rv[3] crntTime[284 3] pdcch[283 10] pucch[283 18]
Line 2720938: [28/07/2025 11:31:24.601] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[11] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[2] txCnt[4] rv[4] crntTime[285 3] pdcch[284 11] pucch[284 18]
Line 2721097: [28/07/2025 11:31:24.611] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[12] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[2] txCnt[1] rv[0] crntTime[286 3] pdcch[285 10] pucch[285 18]
Line 2721220: [28/07/2025 11:31:24.619] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[12] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[0] txCnt[2] rv[2] crntTime[287 0] pdcch[286 11] pucch[286 18]
Line 2721397: [28/07/2025 11:31:24.631] [DBG_07] gSCHDMProcFdbkForTx: rntti[17095] harqId[12] imcs[5] rbStart[0] rbNum[4] tbsSize[48] Ack/Nack[2] txCnt[3] rv[3] crntTime[288 3] pdcch[287 10] pucch[287 18]
mal text file length: 370,531,074 lines: 2,811 Ln: 2,724,567 Col: 34 Sel: 33/1 Unix (LF) UTF-8 INS

```

基站du期望接收的puc slot是18, 终端1c填写的发送slot是18

【问题验证】

#2- 2025-08-04 13:47 - 王金伏

- 文件 20250804-104225.jpg 已添加
- 文件 20250804-104608.jpg 已添加
- 文件 20250804-104608.jpg 已添加
- 文件 20250804-104844.jpg 已添加
- 文件 20250804-134025.jpg 已添加
- % 完成从 0 变更为 80

修改PDC代码, 只是将空口slot填到对应的uecfg中, 其他的pdc处理slot不变, 沿用当前pdc的设备slot. 这样不会影响pdcsch crc结果。

```

#include "gue_dl_phy.h" 1886: *no bit is filled because TP is disabled and a single
#include "log_interface.h" 1887: DMRS Scrambling ID is configured*/
#include "ape_common.h" 1888: uint8_t dmrsSeqInit;
#include "trace.h" 1889: LIC_SETBITRANGE(payload, &bitIdx, 1, &dmrsSeqInit);
steCmnK1Tbl 1890: STORE_EX_B(&dcil_1->dmrsSeqInit, dmrsSeqInit);
trigger_pdsch 1891:
l1c_cfg_pdsch_k0_zero_1 1892: uint8_t numDci1_1=LOAD_EX_B(&ueCfg->sDciRet[dcislotIdx].numDci1_1);
//LOG_ERROR_S("0801 0000 numDci1_1 is %d\n",numDci1_1);
uIdciCnt 1893: //LOG_ERROR_S("0801 0100 numDci1_1 is %d\n",numDci1_1);
ue_parse_dci_format 1894: numDci1_1++;
ue_parse_dci_0_payloa 1895: //LOG_ERROR_S("0801 0100 numDci1_1 is %d\n",numDci1_1);
rgSCHSuFillULDCinfo 1896: STORE_EX_B(&ueCfg->sDciRet[dcislotIdx].numDci1_1, numDci1_1);
ue_parse_dci_1_payloa 1897:
ue_pdcch_dci_parse 1898: //dcil_1->slotIdx = pdcchSlotIdx; //这个slotIdx应该PHY盲检测到DCI而不是解析完DCI的slot
1899: STORE_EX_W(&dcil_1->slotIdx, curSlotIdx);
1900:
1901: UeStateEnum ueState=LOAD_EX_W(&ueCfg->ueState,
1902: //空口slot, 与基站du一致, 不填设备当前slot.
1903: if (ueState == UE_ACTIVE )
1904: {
1905: // stop ue active timer
1906: /*l1c_stop_tmr( &cellCfg, LIC_TMR_UE_NOT_ACTIVE, &ueCfg);*/
1907: /*start ue uactive timer*/
1908: /*l1c_start_tmr( &cellCfg,
1909: ueCfg,
1910: LIC_TMR_UE_NOT_ACTIVE,
1911: 120000); // 1 minus = 60*1000*2 = 120000 slot */
1912:

```

在L1c中判断空口slot时, 必须给当前 (slot+1或slot+2) 给判断是空口slot. 修改后1 基站DU侧部分NACK是应为PDSCH本身有重传原因, PUC上报的就是NACK; 2 DU侧能解析对大部分ACK. (丢失部分dci_1 slot=0的数据, 可能在L1c中清0当时有关, 定位中)。

```

#endif 1778:
#include "gue_dl_phy_struct 1779:
#include "log_interface.h" 1780:
steMult25Tb 1781:
steCmnK1Tbl 1782:
getDedicatedPucchRes 1783:
ue_pucch_generate_harq_bit 1784:
ue_pucch_generate_sr_bit 1785:
ue_pucch_generate_csi_bits 1786:
ue_pucch_muxing 1787:
fill_uci_cmn_info 1788:
ue_get_sr_period_and_offset 1789:
ueCalcUciCrcBits 1790:
ueCalcPucchNumPrb 1791:
ueFillFrm234Info 1792:
ueSetMuxBitmap 1793:
ueFillHqRecpInfo 1794:
ueFillSrRecpInfo 1795:
ueFillCsRecpInfo 1796:
ueFillHqCsiAndSrRecpInfo 1797:
ueFillCsAndSrRecpInfo 1798:
ueFillHqAndCsiRecpInfo 1800:
ueFillHqAndSrRecpInfo 1801:
ueFillUciRecpRes 1802:
#endif 1802:
if 1
for (idx0=1; idx0 < 6; idx0++)
{
// protect code, avoid slot overturn
if ( curSlotIdx < idx0)
{
dciSlotIdx = (curSlotIdx + 20 - idx0) % 20;
}
else
{
dciSlotIdx = (curSlotIdx - idx0) % 20;
}
//
//LOG_INFO_S("0801000 pdcchSlot[%d] sfn1[%d] ueCfg->sDciRet[(curSlotIdx) % STE_NUM_SUB_FRAMES].dci1_1[0].slotIdx, sfn1);
if ( ((LOAD_EX_W(&ueCfg->sDciRet[dcislotIdx+1].dci1_1[0].slotIdx) == dciSlotIdx)
&& (LOAD_EX_B(&ueCfg->sDciRet[dcislotIdx+1].numDci1_1) ))
{
break;
}
} // end for idx0=1,idx0<6,idx0++

```

必须基于空口slot延后1或者2slot, 因PDC处理时, 这里填写的是设备当前处理slot, 会比空口slot晚1到2个slot的处理时延, 此处改动需加上或[dcil_1+1] 或者[dcil_1+2]

- 20250804-104844.jpg
- 20250804-134025.jpg

#3 - 2025-08-04 13:48 - 王金伏

- 文件 20250804-134025.jpg 已添加

#4 - 2025-08-04 13:51 - 王金伏

- 文件 已删除 (20250804-134025.jpg)

#5 - 2025-08-04 13:51 - 王金伏

- 文件 已删除 (20250804-134025.jpg)

文件

20250728-165532.jpg	332 KB	2025-07-28	王金伏
20250728-165635.jpg	581 KB	2025-07-28	王金伏
20250728-165723.jpg	1.45 MB	2025-07-28	王金伏
20250728-170231.jpg	424 KB	2025-07-28	王金伏
20250728-170243.jpg	1.31 MB	2025-07-28	王金伏
20250804-104225.jpg	278 KB	2025-08-04	王金伏
20250804-104608.jpg	282 KB	2025-08-04	王金伏
20250804-104608.jpg	282 KB	2025-08-04	王金伏
20250804-104844.jpg	164 KB	2025-08-04	王金伏