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Himanshu Jain					
	Checked	Date		Rev	Reference
		25-04-2020		Ver1.0	

MOP of BBU CPRI Interface Error Huawei Site

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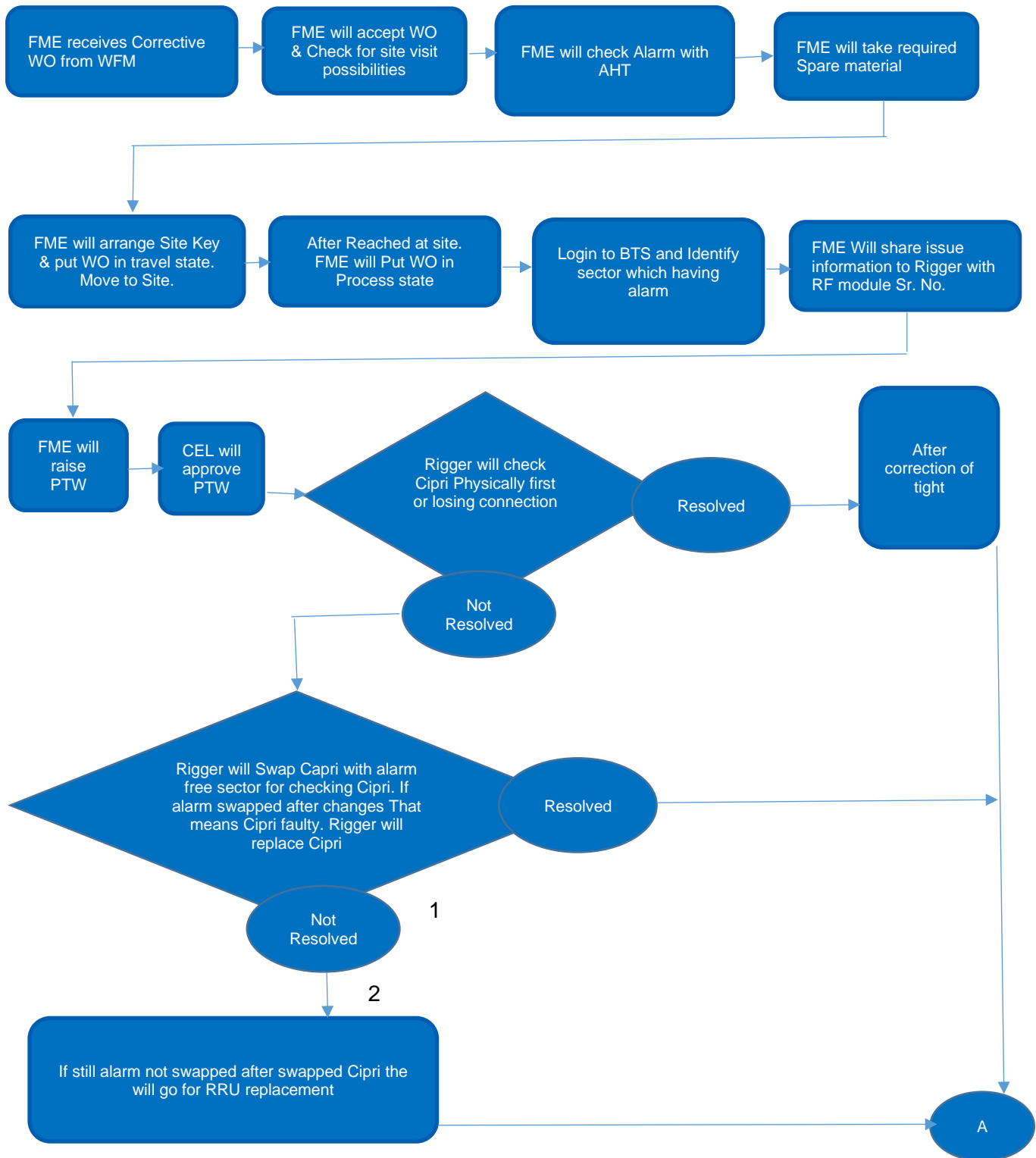| Prepared (also subject responsible if other)		No.			
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Activity Description

This activity is for E2E troubleshooting and alarm clearance of BBU CPRI Interface Error of the antenna feeder abnormal.

Attached is the details to be followed. As this need to be followed as guideline.
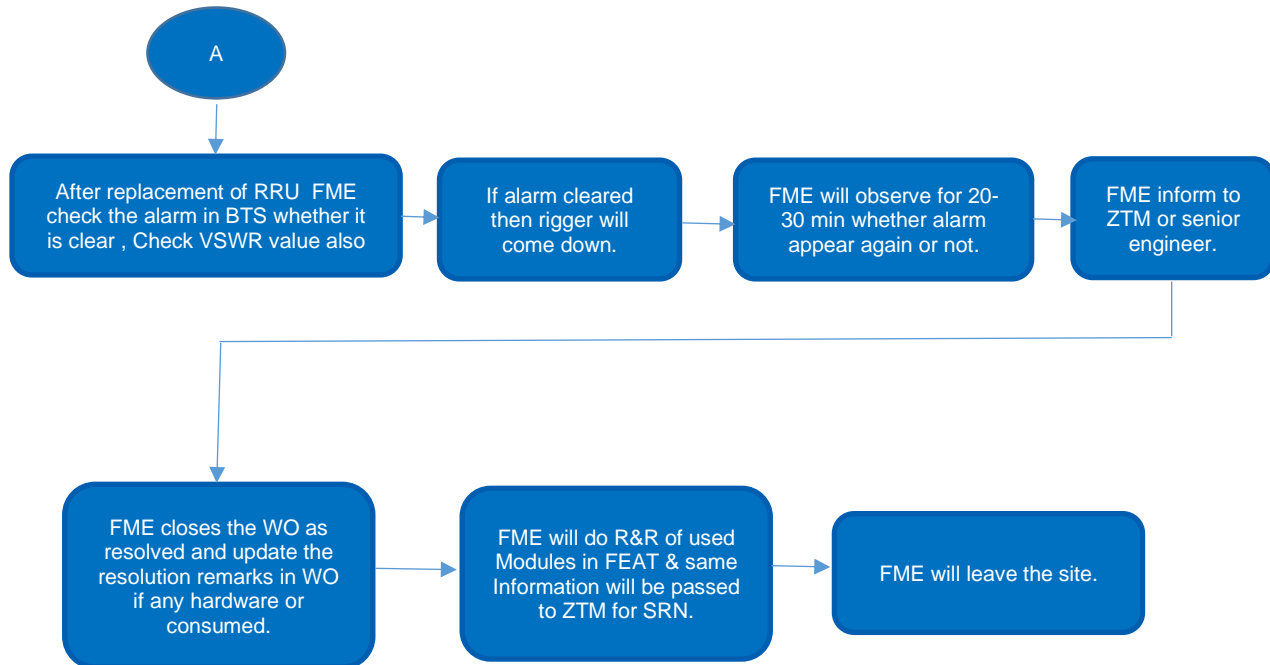
Alarm Name	1. BBU CPRI Interface Error 2. RF maintenance link failure 3. Cell unavailable
Alarm Description	1. Impacted sector KPI Degraded 2. Other Layer KPI degradation 3. sector may be down in some cases
Possible Causes	1. CIPRI faulty (Physical Damage or internal fault) 2. RRU malfunction or faulty

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Flow Chart

```
┌─────────────────┐   ┌─────────────────┐   ┌─────────────────┐   ┌─────────────────┐
│ FME receives    │→  │ FME will accept │→  │ FME will check  │→  │ FME will take   │
│ Corrective WO   │   │ WO & Check for  │   │ Alarm with AHT  │   │ required Spare  │
│ from WFM        │   │ site visit      │   │                 │   │ material        │
│                 │   │ possibilities   │   │                 │   │                 │
└─────────────────┘   └─────────────────┘   └─────────────────┘   └─────────────────┘
```

```
┌─────────────────┐   ┌─────────────────┐   ┌─────────────────┐   ┌─────────────────┐
│ FME will arrange│→  │ After Reached at│→  │ Login to BTS and│→  │ FME Will share  │
│ Site Key & put  │   │ site. FME will  │   │ Identify sector │   │ issue information│
│ WO in travel    │   │ Put WO in       │   │ which having    │   │ to Rigger with  │
│ state. Move to  │   │ Process state   │   │ alarm           │   │ RF module Sr.No.│
│ Site.           │   │                 │   │                 │   │                 │
└─────────────────┘   └─────────────────┘   └─────────────────┘   └─────────────────┘
```

- FME will raise PTW
- CEL will approve PTW
- **Rigger will check Cipri Physically first or losing connection** → Resolved → After correction of tight
  - Not Resolved
- **Rigger will Swap Capri with alarm free sector for checking Cipri. If alarm swapped after changes That means Cipri faulty. Rigger will replace Cipri** → Resolved → (1)
  - Not Resolved (2)
- If still alarm not swapped after swapped Cipri the will go for RRU replacement → A

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A

After replacement of RRU FME check the alarm in BTS whether it is clear , Check VSWR value also

If alarm cleared then rigger will come down.

FME will observe for 20-30 min whether alarm appear again or not.

FME inform to ZTM or senior engineer.

FME closes the WO as resolved and update the resolution remarks in WO if any hardware or consumed.

FME will do R&R of used Modules in FEAT & same Information will be passed to ZTM for SRN.

FME will leave the site.

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Activity Details

BBU Cipri Interfacer error Alarm Information & Checking for corrective action

1. FME receive work order in WFM of BBU cipri Interface alarm as a corrective work order
2. FME accept WO as received/WO accepted as per check his CMT tool
3. FME check the alarm with help of AHT
4. If possible FME visit site on same day otherwise will plan on next day (Need to verification Required Rigger can access Tower after reached site as per OHS Rules).
5. ZTM will suggest for taking required Spare Material…

Site Movement & Spare Arrangement

1. FME arrange key of site from respective Infra partner.
2. FME take required materials to resolve the alarm (As per Remote Login Observation & CEL suggestion) …
3. Now FME move to site and put WO in Travel state

Alarm issue Identification & Rectification

1. When FME reached at site, he put WO in progress state.
2. FME will login to the BTS & Identify Sector which is having alarm.

Add snaps of port to connect on equipment/laptop…command. Etc

```
LST ALMAF;
SRAN_HRD03-FNP-IF
+++    SRAN_HRD03-FNP-IF       2020-04-26 11:49:42
O&M    #46583
%%/*1884162128*/LST ALMAF:;%%
RETCODE = 0  Operation succeeded.

ALARM  38240    Fault    Minor         SRAN      26234    Hardware
        Sync serial No.  = 85466
             Alarm name  = BBU CPRI Interface Error
     Alarm raised time  = 2020-01-29 06:31:32
         Location info  = Cabinet No.=0, Subrack No.=0, Slot No.=2, Port No.=1, Sub Port No.=0, Board Type=UBBP, Specific Problem=CPRI Interface Reception Error
          Special info  = RAT_INFO=GL, AFFECTED_RAT=L, DID=NULL, Cumulative Duration(s)=90
         Special info1  = AF_L=HRD03
       Root Cause Flag  = 1
Correlative label type  = 2
```

3. FME will share information to rigger for further check (Cipri damage, Connection on rru on top of tower)
4. FME will ensure the PPE kit, work at height certificate, medical certificate, present healthy physical condition, site condition including hygiene
5. Raise PTW request

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6. ZTM check the PTW and approve it.
7. Rigger will climb the tower and check below Points for actual issue identification

   A. If Rigger found in physical damaged in Cipri, then he will replace same. FME Will check alarm through login for further confirmation.

   B. Or not found any physical damage then Rigger will swap cipri with alarm free sector for cross check (RRU or having any cipri internal damaged fault) alarm. If alarm swapped after swapping cipri cable that means, there is fault of Cipri cable. Rigger will further replace cipri & resolved the same. FME will monitoring alarm some more time for conclude.

   C. If alarm not swapped after swapping of Cipri cable, then there is fault in RRU. Discussed with ZTM & share information. Replace RRU

8. FME check the alarm in BTS whether it is clear & verify VSWR value of all sector. (VSWR Value should below then 1.3)

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Cleared :

```
RM  30544     Fault    Minor          SRAN    26504    Communication
   Sync serial No.  = 65556
        Alarm name  = RF Unit CPRI Interface Error
Alarm raised time  = 2020-04-24 10:01:49
     Location info  = Cabinet No.=0, Subrack No.=200, Slot No.=0, Port No.=Port 0(West), Board Type=MRRU, Port Type=NULL, Specific Problem=CPRI Interface Receptic
      Cleared type  = Normally cleared
      Cleared time  = 2020-04-24 10:03:24
     Special info   = RAT_INFO=GL, AFFECTED_RAT=L, DID=NULL, RF Unit Name=NULL
     Special info1  = AF_L=SNOT01
  Root Cause Flag   = 1
relative label type = 2
              LCK   = 2102310WYGN0H801584700007750

RM  30543     Fault    Minor          SRAN    26504    Communication
```

Command Editor

◉ Show Parameter Panel   ⬗   ⬗   ☆ | LST ALMLOG   ▼ | ▥   Run

9. If alarm is cleared, then rigger will come down
10. FME will observe for 20-30 min whether alarm appear again or not.
11. If alarm don't appear again it means alarm resolved, then FME inform to ZTM or Senior engineer about the same
12. FME closes the WO as resolved and update the resolution remarks in WO if any hardware or consumable material used.
13. FME will do R&R of used Modules in FEAT & same Information will pass to ZTM for SRN.
14. FME leave the site.