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Ishwar Singh				
Approved	Checked	Date	Rev	Reference
		13-02-2020	Ver1.0	

MOP of RX Path imbalance Alarm for Ericsson Site

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Activity Description

This activity is for E2E troubleshooting and Clearance of RX Path imbalance alarm cell/ site.

Attached are the details to be followed by RAN Team. As this need to be followed as guideline.

Alarm Name	RX Path imbalance alarm at ONE FM end
Alarm Description	RX Path imbalance alarm due RX path issue between Ant. To RRU
Possible Causes	1. VSWR issue 2. Jumper/feeder connection issue 3. Connector issue

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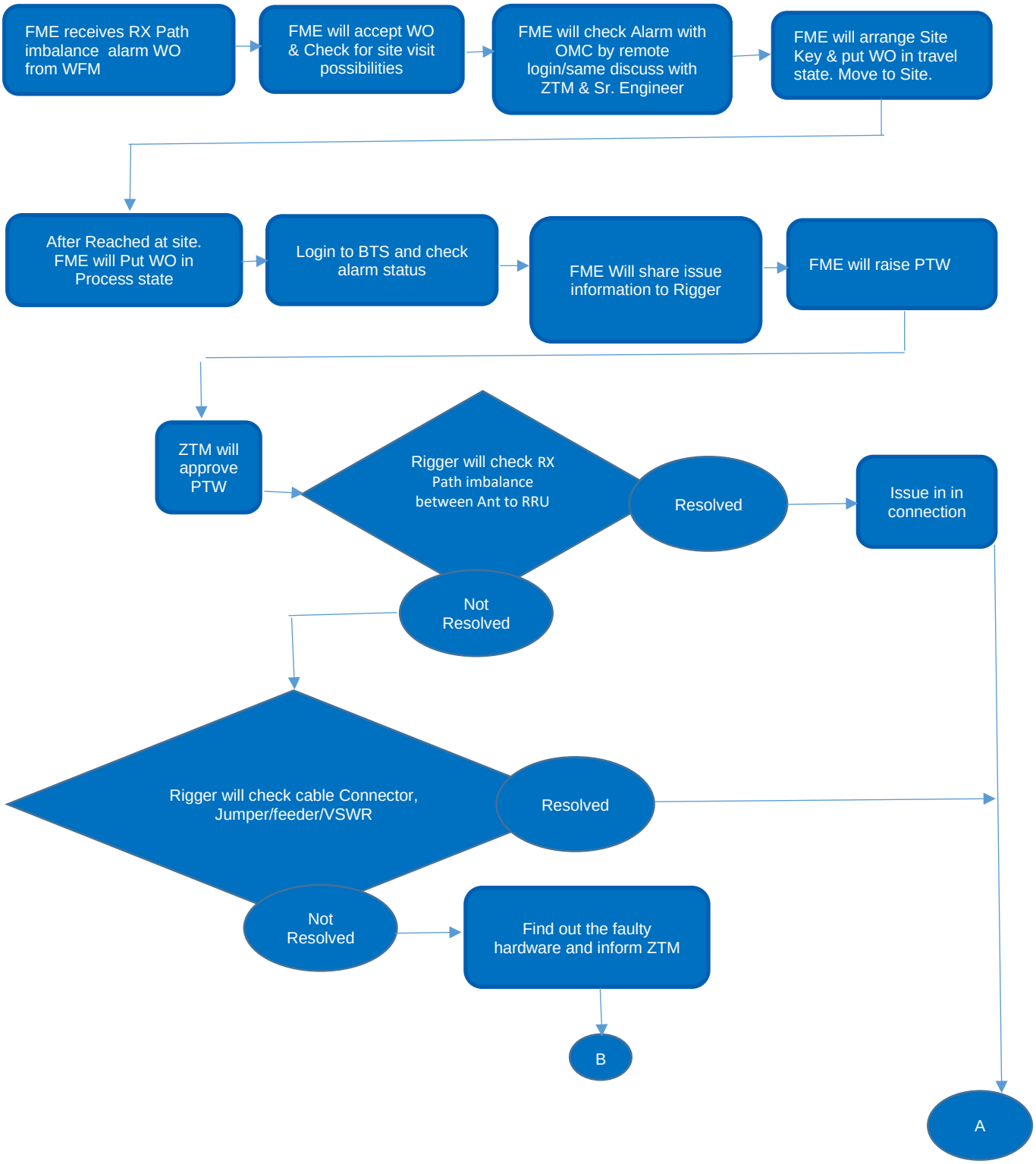
Flow Chart



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Activity Summary

1	Corrective WO Time Sync Reference Failed alarm is received on WFM portal
2	FME will Accept the WO
3	Put WO in travel
4	After reaching site - put WO in process
5	Login the BTS & Check alarm status
6	Raise PTW to ZTM
7	PTW Approval done by ZTM
8	Rigger will Check GPS Connectivity from Node B to GPS
9	FME will check in BTS (Alarm cleared or not)
10	If cleared, then Put WO in closed state
11	If not cleared, then check GPS Cable /Connector / GPS Antenna/GPS Receiver /GPS Cable (1/2”)
12	Put Work order in Waiting internal if any HW Req at site
13	Raise Req of Hardware to BSS Team
14	Once Material received again put WO in Travel mode
15	After reaching site - put WO in process
16	Raise PTW to ZTM
17	PTW Approval done by ZTM
18	Replace the hardware
19	Check from BTS Login that alarm cleared or not after hardware replaced
20	Once Alarm Cleared
21	FME will close the WO as resolved

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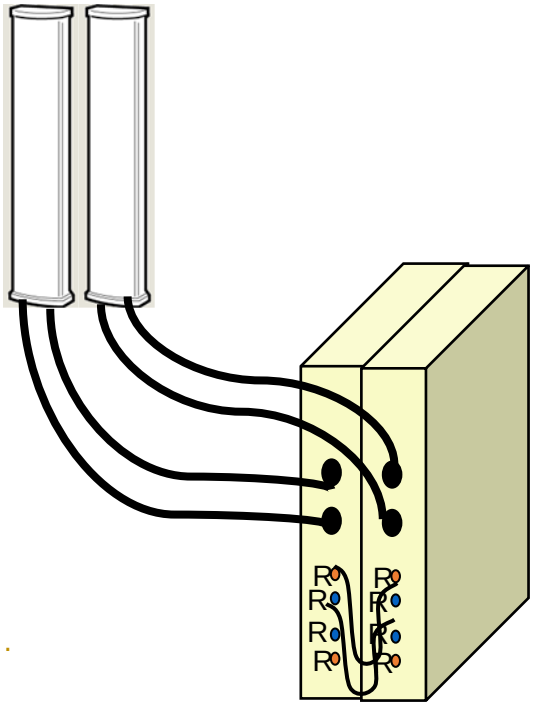
Activity Details

Pre requisites:

1) SVD WO for RX Path imbalance alarm.
2) Alarm on OneFM /WFM.

When Rx Path Imbalance Alarms reflects, Below the activities need to be done step by step to clear the alarm

To Check Connector /Feeder/Jumper/VSWR



```
STATE  BLSTATE  INTERCNT  CONCNT  CONERRCNT  LASTFLT   LFREASON
OPER            00000

FAULT CODES CLASS 2A
 57

REPLACEMENT UNITS
40

END

<
```

3.2.27 SO CF I2A:57 - RX Path Imbalance

Related Faults Section 5.4.5 AO RX I2A:5 - RX Path A Imbalance on page 92
Section 5.4.6 AO RX I2A:6 - RX Path B Imbalance on page 92
Section 5.4.7 AO RX I2A:7 - RX Path C Imbalance on page 92
Section 5.4.8 AO RX I2A:8 - RX Path D Imbalance on page 93
Section 5.12.13 AO TX I1B:35 - RX Path Imbalance on page 105
Section 5.13.1 AO TX I2A:0 - TX Diversity Fault on page 106
Related RUs SO CF RU:40 - Antenna Section 3.5 SO CF Replacement Unit Map on page 42
Description This fault is raised if the difference in signal strength between two antennas in the same antenna system exceeds the limits defined by the Define RX Path Imbalance Parameters in the OMT.
If the class 1 limit is exceeded, related fault AO TX I1B:35 is also raised and the TX disabled.
The supervision of this fault is based on measurements over a long period; hence the fault does not cease as soon as the fault is corrected. The RX imbalance monitor must therefore be used to verify the correction of the fault.

Action Follow the instructions below:
• Check the defined RX path invariance limits using the Define RX Path Imbalance Parameters function in the OMT for the faulty antenna system.
• Check the TX cables/feeders, cable connections inside and outside the cabinet and antennas, for example, with Antenna System SWR tests. For information about how to perform an VSWR test, see document Verifying System Antennas or document Antenna System Tests for the relevant RBS.
• When the fault is corrected, reset the RUG/RUS/RRUS to cease the fault immediately.
Note: If the fault is not resolved, it is reported again as soon as the minimum number of samples is collected.

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The following Steps must be taken to identify the alarm.

> If the path between Radio and Antenna is mismatch.

> If sector swap is there in any sector, there is a of chance of RX imbalance path alarm irrespective of VSWR value.

> If there is no VSWR alarm, TX cables/Feeder swapping and any other loose connection also.

The following measures must be taken to clear this alarm.

> Need to check path between Radio and Antenna, it should be same +ve and -ve of Radio and antenna resp.

> Need to check Sector Swap and clear if found.

> Need to check connection it should be tight.

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a) If tower work involves, perform PTW

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Post Analysis

Step No.	Step Name/Step Type	Command	Field	Mandatory (Y/N)	Expected Result
1	FME will visit the site after 1-2 Hrs to check	As per MOP and run the alarm check command to confirm its Cleared	RAN	Y	As per MOP
2	BSS Team will check after 24 hrs if alarm has reappeared	As per MOP			