

Agenda Item : 6.6
Source : NTT DoCoMo
Title : Associating failures with UEs
Document for : Discussion

1. Abstract

This contribution proposes a new concept of O&M functionality; associating a specific failure case with a specific UE that has been involved in.

2. Background

It is natural that a subscriber feels discontented when his/her on-going call terminates against his/her will. It is also natural that some of these subscribers may make complaints to customer service desk about the abnormal terminations. In order for the operators to cope with such complaints and to satisfy those subscribers, operators are requested to point out the reasons for the why such failures have occurred, explain the reasons to the subscribers, and retrieve/improve the failed system.

With such functions, operators receive the following benefits:

- Operators are able to provide services with better customer-satisfactory through quick responses to the failure complaints by referring the Failure-Database
- Operators are able to find out thin-coverage areas through subscribers' requests
- Operators are able to find out the "latent failures" which are not reported through the alarm messages to Management Platform but from the subscribers

To realise the functions, a table as shown below may be helpful. This Failure-Database may be stored in the management system. By referring this table, the customer service desk can be noticed what happened to the call.

UE Identifier	Date/Time	Location	Failure reasons	Occupied resources before failure
...
012345	1999/05/24 23:19:51	Cell ID =321,323,324	Too frequent radio errors	- Logical resources: X, Y, Z.... - Implementation specific resources: P,Q,R...
098765	1999/05/24 23:20:30	Cell ID = 567,579	Amplifier failures in NodeB	- Logical resources: A,B,C... - Implementation specific resources: I,J,K...
032178	1999/05/24 23:35:09	Cell ID = 1021,1022	High Interference in NodeB	- Logical resources: F,G,H.... - Implementation specific resources: R,S,T...
011212	1999/05/25 00:05:21	Cell ID = 45, 46, 59	Failure in antenna	- Logical resources: L,M,N.... - Implementation specific resources: B,C,D...
...

This function may be provided as a part of either Logical O&M or Implementation Specific O&M. Whether these functions belong to Logical O&M or Implementation Specific O&M is out of scope in this contribution.

3. Proposal

It is proposed to add a new section in TS25.401 chapter 10:

10.1.3 Association of Implementation Specific O&M with specific UE

As competition among operators becomes more severe, operators are required to provide better services than other operators do so that the "hungry" subscribers are satisfied. When people are willing to choose an operator and subscribe to, reputation of complaint procedure is one big factor. Swift and precise complaint procedure may make those people feel that it is worth subscribing.

Possessing a database which accumulates failure records associated with specific UEs is one function that helps for better complaint procedure. When a subscriber requests for e.g. explanation of unwilling call termination, the customer service can quickly acknowledge the reason for the failure and explain it by referring the details in the database.

To meet such demand, UTRAN may have a function that enables the system to associate failures in each individual UTRAN node with specific UEs. Such function may be provided at each operator's will.