**Quality Excellence for Suppliers of
Telecommunications Forum
(QuEST Forum)**

TL 9000
Quality Management System

Measurements Handbook

CCRR Examples

9.2   CCRR Examples

9.2.1 – CCRR Example 1 – Product Categories 9.x

Customer Complaint Report Rate is a measure of the dissatisfaction of the service as reported by the customer. CCRR is the ratio of number of complaints over the customer base for the service. CCRR reports are classified according to the type of complaint, either technical or non-technical. The Normalization Unit (NU) for each product category is defined in Appendix A, Table A-2.

1) Consider one month's data for an organization of a particular service. There are 1040100 customers in service at the end of the month and NU is "number of customers for the service." The organization received 7544 complaints of a non-technical nature and 2100 of a technical nature for the service in the month.

2) The data reported is shown in Table 9.2-1.

Table 9.2-1 CCRR Data Table Report for Product Categories 9

Identifier	Value
Measurement ID	CCRR
CCRRa	12
CCRRs	1040100
CCRR1d	7544
CCRR2d	2100

3) The measurement calculation result is shown in Table 9.2-2

Table 9.2-2 CCRR Source Data and Measurement Calculations for Product Categories 9

Customer Complaints	Afactor	Normal-ization Units	CCRR Measurement Result Complaints per service customer per year
CCRR1d =	12	1040100	CCRR1 = 0.087
CCRR2d =	12	1040100	CCRR2 = 0.024
CCRRd =	12	1040100	CCRR = 0.110

The calculation for CCRR1 is

CCRR1 = 7544 x 12 / 1040100 = 0.087 technical service complaints per customer per year

The calculation for CCRR2 is

CCRR2 = 2100 x 12 / 1040100 = 0.024 non-technical service complaints per customer per year

The calculation for CCRR is

CCRR = 9644 x 12 / 1040100 = 0.110 total service complaints per customer per year

9.2.2 – Annualization

In End Customer Service categories data are collected and reported over defined time periods. Normally data are collected and reported by the calendar month but TL 9000 also allows data to be collected and reported in certain other pre-defined time periods. The time period of collection is reported with the data in the annualization factor, CCRRa, the number of reporting periods in a year. For data collected and reported monthly the annualization factor is 12, the number of months in a year. The permitted time periods for collecting and reporting data are listed in the definition of Annualization Factor in the Measurements Handbook Glossary.