Section 1   Mobile Device Measurements - No Trouble Found (NTF)

1.1 No Trouble Found (NTF)

1.1.1 General Description and Title

No Trouble Found is a measure of the returns that come back from the SERVICE PROVIDER and when tested at the first test point no defect is identified.

1.1.2 Purpose

These measurements are largely focused on North America and post-paid products. For global and pre-paid products, these measurements can be modified.

No Trouble Found (NTF) measures the percentage of in-warranty returns tested with no fault found. The devices measured shall include devices returned post buyer's remorse period during the in-warranty period.

1.1.3 Applicable Product Categories

In general, these measurements apply to:

Mobile Devices

PC Code	Category Name	Definition
6.2.1.2.1	Feature Phone	A mobile phone that provides basic voice and text functions and may provide other features.
6.2.1.2.2	Smart Phone	A smartphone, or smart phone, is a mobile phone built on a mobile operating system, with more advanced computing capabilities than a feature phone.

1.1.4 Detailed Descriptions

1) Terminology

    a) No Trouble Found (NTF) measures the percentage of in-warranty returns tested with no fault found

    b) In warranty period applies to any eligible device for warranty exchange/repair, excluding the BRE period

    c) A No Fault Found device is defined as a returned device tested and passed

    d) The NTF reporting period is post BRE period to the end of the in-warranty period

    e) WIRELESS SUBSCRIBER, the end-user of the wireless mobile device

    f) SERVICE PROVDER, the organization that sells the mobile services to the end-user

    g) MANUFACTURER, the organization that provides the wireless mobile device to the SERVICE PROVIDER

2) MANUFACTURER Responsibilities

    a) Provide best effort that normalization values are accurate and representative of the active in-warranty population

3) Counting Rules

    a) Units returned to the MANUFACTURER shall be counted in the month they are tested

    b) NTF data submission shall only include data for device models that have reached general availability

4) Counting Rule Exclusions

    a) Units returned with visible shipping damage or WIRELESS SUBSCRIBER abuse are not counted

    b) Pre-paid devices are not counted in the NTF measurement

    c) Units returned under insurance claims are not included

    d) Units are not counted if the sales model is older than 18 months from date of initial launch

5) Calculations and Formulas

    a) NTF measurements are reported quarterly with monthly data submitted 7 weeks following the end of the quarter

    b) The reporting period is the calendar month

    c) Formula for normalized NTF is:

    Returned units that come back from the SERVICE PROVIDER and tested at the first test point and no defect is identified / total number of devices tested

Table 1.1-1   NTF Notation

Identifier	Definition
NTFr	Returned units that come back from the SERVICE PROVIDER and when tested at the first test point and no defect is identified
NTFs	Total number of devices tested in the period

Table 1.1-2   NTF Measurement Identifiers and Formulas

Identifier	Title	Formula	Note
NTF	No Trouble Found	(NTFr / NTFs) x 100	%

1) Reported Data and Format, the organization shall
    a) Submit data on measurements that are within the scope of this document
    b) Correct any data discrepancies, and resubmit corrected data for any erroneous data submitted

c) The NTF measurement shall be reported for each month (refer to Counting Rules) and each product category with data elements, or equivalent as defined in Table 1.1-1

1.1.5 Sources of Data
NTF data is provided by the party that conducts the first test of the device after returned from the WIRELESS SUBSCRIBER

1.1.6 Ranges and Floors
a) No ranges established
b) No floors established

1.1.7 Examples
Examples for applying the NTF measurement:

Month Since Launch	#NTF	Total Quantity Device Tested	Calendar Month	Result
1	3,200	11,000	January	29.09%
2	3,600	10,200	February	35.29%
3	2,900	9,100	March	31.87%
4	2,100	6,900	April	30.43%
5	1,900	5,800	May	32.76%
6	2,600	7,300	June	35.62%
7	2,300	6,200	July	37.10%
8	2,800	6,900	August	40.58%
9	1,500	5,000	September	30.00%
10	1,600	4,800	October	33.33%
11	1,500	4,900	November	30.61%
12	1,400	4,800	December	29.17%