# Questions and Answers for Procurement of Drive test , Quality of service and Benchmarking System for Mobile Network    (NCB Number: G1.3.4)(updated until 8ᵗʰ April 2019)

Tender Committee of Posts and Telecommunications  Department received   questions   regarding  the procurement of  Drive test , Quality of  service and Benchmarking  System  for Mobile   Network   (NCB Number: G1.3.4) during the previous week until 5ᵗʰ April 2019.These questions are answered as follows:-

*Republic of the Union of Myanmar*

Telecommunications Sector Reform Project

Drive test, Quality of service and Benchmarking System for Mobile Network

**Credit No**. 5353-MM.
Questions & Answers

Tender Title: Procurement of Drive test, Quality of service and Benchmarking System for Mobile Network
NCB Number: G1.3.4

**Upated 8ᵗʰ April, 2019**

| # | Page # | Ref. Clause # | Description in NCB | Question | Answer | Batch# |
|---|---|---|---|---|---|---|
| 1 | 50 | Item 1 | Test phone in isolation box (module) for GSM/UMTS/LTE (VoLTE)Voice quality (MOS) measurement and UMTS/LTE DL/UL Also<br><br>20 sets | What does 20 sets mean? 20 modules or 20 boxes with modules? If the later, how many module in each box? | We required 2 systems (one system 10 sets), phone in isolate box mean the phone if put beside phone (too close) the signal will be effect between phones. So that why we need phone is in isolate module (you can call box term is similar). One system/big box/rack/ chassis will be covered many small boxes or modules. | 1 |

| 2 | 50 | Item 2 - 6 | Test phone working in idle mode for GSM coverage measurement.<br><br>Test phone working in idle mode for UMTS coverage measurement.<br><br>Test phone working in idle mode for LTE coverage measurement.<br><br>Test phone for UMTS/LTE upload measurement.<br><br>Test phone for UMTS/LTE download measurement | There are individual phones, meaning item 2 is separate from item 3, and so on which means they will need 44 phones? In practically, they can just get 10 phones which can do GSM, UMTS, LTE sequential test. | Individual phone were required to do testing separately.<br>You are right we can do testing each technology one by one in case we have enough time and resource. If not, we have to do test all technologies at same time. One other idea, for testing continuously, for example, GSM -- UMTS --LTE --GSM --UMTS --LTE....and you can see, some place of route will have GSM, some places no GSM signal...so we cannot do benchmark like that.<br>That reason why we need that number of phones to do testing same time, same route, same car.<br>Pls refer the detail explain on section VI on NCB. | 1 |
| 3 | 50 | Item 8 | Test phone are standalone test phone for five operators.<br>Note: Standalone test phone is Android or iOS based (not required laptop controlling) that supports independent testing and monitoring KPIs | It say not required lap top item 13 say high quality laptop | Phone with application integrated on phone Android or iOS(eg.TEMS pocket), not required laptop control. We explained detail already. Pls check detail on NCB. | 1 |
| 4 | 50 | Item 13 | Accessories to control the system: UE retainer kit, RF splitter, USB cable, power cable, backup battery, antenna, GPS, High quality Laptop. | What is the laptop for? | Laptop with Software for configure system, for analyse and post processing, reporting.<br>Minimum laptop specification requirement is core i7, HDD 500MB, RAM 8GB,… | 1 |
| 5 | | | | Indicative project start date | Project start on 2 May 2019 | 2 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 6 | | | | Indicative project duration | Duration 5.5 months (upto 10 Sep 2019) | 2 |
| 7 | | | | Indicative budget | =~ USD 900,000 | 2 |
| 8 | | | | detailed requirement (if any) for specific performance indicators to be measured and benchmarked. | Pls find detail in NCB document (RFQ) as BDS, section III, section VI. | 2 |
| 9 | | | | detailed requirement (if any) for measurement methodology to be used | Pls find detail on NCB as BDS, section III, section VI. | 2 |
| 10 | | | | detailed requirement (if any) for amount of measurements to be done (e.g: km of drive/walk testing, cities/ areas to be covered…) | Pls find detail in NCB document (RFQ) as BDS, section III, section VI. | 2 |
| 11 | | | | Required output and deliverable formats | Pls find detail in NCB document (RFQ) as BDS, section III, section VI. | 2 |
| 12 | | | | Requirements (if any) for result presentation (s)and further analysis / consulting | Pls find detail in NCB document (RFQ) as BDS, section III, section VI. | 2 |

| 13 | | | | Requirement (if any) for hardware and/or software to be handed over to PTD | Pls find detail in NCB document (RFQ) as BDS, section III, section VI. | 2 |
|---|---|---|---|---|---|---|
| 14 | | | | According to your plan, each BM set consists of 32 mobile phones and 1 scanner, however no tool has capability of 32 x mobile phones in single system? Moreover the power system of the drive test car might not capable to handle 32 mobile phone set power need? | We already studied solutions of many manufacture and we already bought BM system. Therefore, we can make sure that top 4 suppliers in the world has solution to cover our requirement. You are right to mention about power supply for whole system. They will be required chasiss or rack mount type or box to control and supply power for phones and also collect data.<br><br>(e.g, Pls check XCAL, Swissqual, Nemo, TEMS…)<br><br>Below are reference links:<br><br>AccuverXcalMTo or MTS: support up to 60-120 devices<br>http://accuver.com/acv_products/xcal-mo-iii/<br><br>R&S Swissqual: support upto 48 devices<br>https://www.mobile-network-testing.com/en/products/benchmarking/diversity-benchmarker-2/<br><br>KeysightNemo: up to 50 devices and 4 scanners<br>https://www.keysight.com/en/pd-2767464-pn-NTB00000A/nemo-invex-ii?cc=VN&lc=eng<br><br>InfovistaTEMS symphony or paragon: | 3 |