

R. Dionísio *et al.*, "Affordable LTE network benchmarking based on transport fleets," *2017 4th Experiment@International Conference (exp.at'17)*, Faro, Portugal, 2017, pp. 115-116.

doi: 10.1109/EXPAT.2017.7984387

URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7984387&inumber=7984334>

To gain competitive advantage in today's mobile market, cellular network testing, monitoring and improving customer experience is crucial. Today independent benchmarking companies are hired by mobile operators to run drive tests in a certain geographical areas. The high cost for running these tests results in a low frequency of execution, typically this benchmarking is executed no more than two or three times per year, which is not sufficient to follow the dynamics of an LTE network in a dense urban area. The majority of the drive testing costs come from the car, driver, and the in-car technician. Another approach is to take advantage of existing transportation companies to carry on network benchmarking services to Mobile Network Operators. Unattended measurement nodes can be deployed in existing transportation fleets without the need for dedicated field personnel, reducing the cost of testing up to 70%. This demo uses nodes placed in buses, available in several cities in Europe, to create and validate an automatic LTE network benchmark. The tool allows an easy comparative analyses of mobile network quality of Service and quality of experience parameters based on the operators raw data.