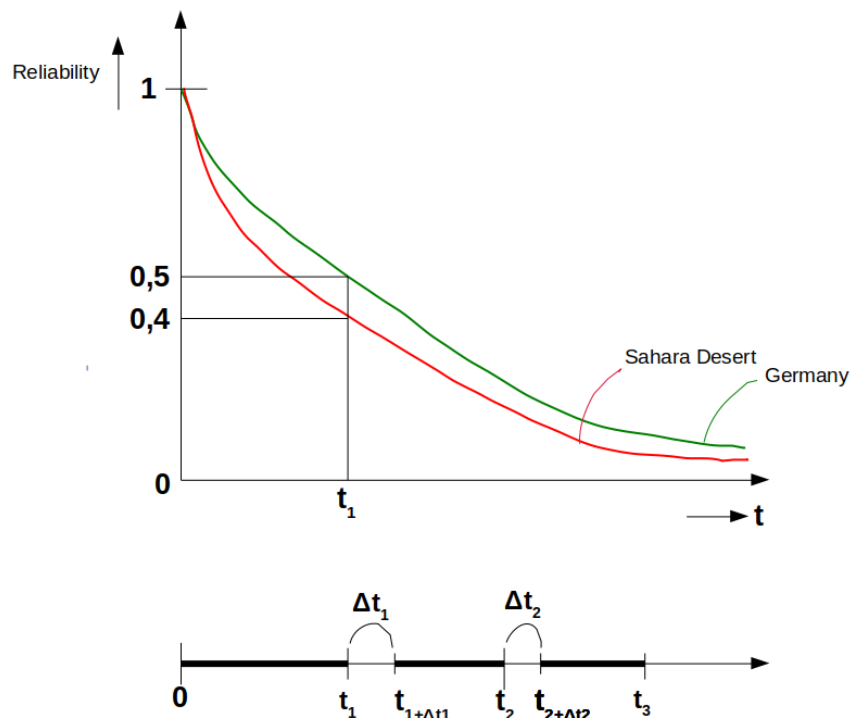


Reliability and Availability – Diagram from lecture 2 - Terms SQA



- **Graph**

- ∞ In the graph, t_1 is some a random point in time when we want to check the reliability of our systems – two cars driven in different environments.
- ∞ Green denotes car driven in Germany, and red in Sahara desert.
- ∞ @ t_1 , car driven in Germany has higher reliability (0,5) than that of the car driven in Sahara desert (0,4).
- ∞ In general, the car in Germany has higher reliability than the one driven in desert.

- **Timeline**

- ∞ In the timeline below the graph, system begins functioning at t_0
- ∞ **Thick lines** represent the time when the system is functioning.
- ∞ @ t_1 system fails for the first time. Δt_1 is the time taken to repair it. At @ $t_1+\Delta t_1$ it is back to functioning.
- ∞ @ t_2 system fails again, and gets repaired in Δt_2 time.
- ∞ Δt_1 and Δt_2 represent **Mean Time To Repair - MTTR**.
- ∞ 0 to t_1 , $t_1+\Delta t_1$ to t_2 and $t_2+\Delta t_2$ to t_3 represent **Mean Time Between Failures - MTBF**.

Reliability = MTBF

Availability = MTBF / (MTBF+MTTR)