

### 8.3 When is a 6-minute average needed, and when is a snapshot enough?

Scenario 1: Broadcasting tower with FM and TV transmitters as the dominant services. If you take a 6-minute average here, you will have wasted 5 minutes and 59 seconds. A brief average over a few seconds is enough for a result. Just like the transmitter output power, everything stays the same.

So, is a 6-minute average of any practical use?

Scenario 2: A further trunked radio antenna is to be installed on a rooftop. The [Narda Personal Monitor RadMan/Nardalert](#) carried by the installation team keeps beeping, depending on which of the other antennas on the rooftop is transmitting at the time. It can be quite alright for the limit value to be exceeded for a brief moment, but the limit must not be exceeded when the average is taken over a 6-minute period.

At this point, a safety rep equipped with a broadband measuring device such as the [Narda NBM](#) joins the team and carefully checks the average over the 6 minutes. If the Personal Monitors do not stop beeping and the 6-minute average is getting close to the limit value, it's time for the installation team to move away to safety. So, this is where a 6-minute average is really useful. Of course, you could ask the trunked radio providers to turn off all the services while the work is done, but who would want to do that?



Where does this 6-minute average come from? It is mentioned, for example, in a footnote in the ICNIRP Guidelines 1998. However, the 6-minute time interval is often misunderstood. The Guideline does not say that you only need to measure for 6 minutes, and then everything is fine. It states that the value is “to be averaged over any 6-min period”. Which means that the measurement is made 24 hours a day, 7 days a week with a sliding 6-minute average. Now, the ICNIRP Guideline is not a measurement regulation, it is a scientific paper. How the measurement is made in practice is left up to the individual to determine what is sensible. No two measurement situations are the same, so a new assessment must be made every time.

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