

RECOMMENDATION ITU-R SM.1794

Wideband instantaneous bandwidth spectrum monitoring systems

(2007)

Scope

The increasing use of very broadband digital signals requires broad instantaneous bandwidth receivers to adequately monitor such signals, with the bandwidth depending on certain applications. High dynamic range components are available which have allowed equipment manufacturers to provide systems which have very broad instantaneous bandwidths up to 20 MHz.

The ITU Radiocommunication Assembly,

considering

- a) that there is increasing use of broadband digital signals which are easily monitored with wideband instantaneous bandwidth spectrum monitoring systems, but which appear as noise to narrow bandwidth receivers or monitoring systems;
- b) that digital signal processing (DSP)-based monitoring systems with a very broad instantaneous bandwidth are able to scan the radio spectrum very rapidly, and effectively acquire, measure and perform direction-finding on intermittent, broadband and frequency agile signals;
- c) that high dynamic range receiver components are currently available which allow a wideband receiver with up to 20 MHz of instantaneous bandwidth to receive weak, low-level signals along with very strong signals in the wide instantaneous receiver bandwidth;
- d) that spectrum monitoring stations with such wideband instantaneous bandwidths are small and compact, and lightweight enough that they can be provided in transportable configurations;
- e) that modern computer graphical user interface (GUI) software allows these DSP-based monitoring systems to be easy to use and easy to maintain,

recognizing

- a) that narrower bandwidth systems may be more useful for certain applications, depending on the purpose of the measurement,

recommends

- 1** that administrations which intend to monitor broadband signals for certain applications should consider using an automated, DSP-based system with receivers with up to 20 MHz of instantaneous bandwidth.
-