OPINION ITU-R 100

Compatibility considerations regarding the use of radio frequencies
for purposes not considered within the Radio Regulations
or other relevant ITU publications

(2012)

ITU Radiocommunication Study Group 1,

considering

*a)* that the purposes of the Union set forth in Article 1 of the ITU Constitution envisage the adoption of a broader approach to the issues of telecommunications in the global information economy and society by cooperating with other world and regional organizations and those non‑governmental organizations concerned with electronic communications so as to meet the needs of the information revolution;

*b)* that the continuing growth in demand for telecommunications has resulted in products coming to market that depend on the use of radio frequencies for providing communications over wired and wireless paths which can interact with radiocommunication services operating within their allocated bands;

*c)* that the protection of radiocommunication services is an international obligation that is within the remit of ITU and that regulations, standards and guidance have been established by ITU in order to ensure that the use of radio frequencies for providing reliable communication paths in telecommunication systems and products is also compatible with other uses of the radio frequency spectrum;

*d)* that, in view of the duties of the Radiocommunication Sector (Chapter II of the Constitution) and the Telecommunication Standardization Sector (Chapter III of the Constitution), TSAG and RAG have recognized the need for cooperation between ITU-T and ITU-R so that the exploitation of many types of telecommunications that depend on the use of radio frequencies to establish a communications path over wired connections can be carried out in a manner that remains compatible with the expected operating environment and requirements of radiocommunication services operating within their allocated bands;

*e)* that certainty in maintaining a stable operating environment for radiocommunication services is essential, bearing in mind that, taking due account of geographical and topological considerations, radiocommunication is often the only way of meeting coverage and throughput requirements in an economical and flexible manner and may provide the only certain means of providing resilient communications in the aftermath of disasters or for safety-of-life purposes;

*f)* that the configuration of some types of wire- or cable-based telecommunication systems that depend on the use of radio frequencies to establish a communications path may require similar considerations on compatibility and frequency sharing to those necessary when considering shared use of frequency bands for radiocommunication purposes;

*g)* that specifications for telecommunication products and systems which depend on the use of radio frequencies are increasingly being produced by standards developing organizations, industry alliances and manufacturers without reference to the regulations, standards and guidance established within ITU for ensuring efficient use of the radio frequency spectrum and without the open forum discussions that characterize compatibility studies in ITU on the use of radio frequencies, and which may therefore result in specifications that are not compatible with telecommunication and radiocommunication systems that have been developed in accordance with the regulations, standards and guidance established by ITU;

*h)* that, in particular, the rapid increase in wired and wireless home-networking systems operating in close proximity to each other requires closer attention to improving immunity standards and mitigation techniques;

*i)* that the expertise for considering compatibility between telecommunication systems using direct connections and radio waves is uniquely available within the ITU Sectors from telecommunication and radiocommunication experts from the private sector, government and regulators, and that participation is open to all interested parties through the various membership categories available in ITU,

noting

1 that the Telecommunication Standardization Sector and the Radiocommunication Sector have developed cooperation mechanisms to ensure that systems using radio frequencies of interest to either Sector can be developed in such a way that the various compatibility issues, which may arise between wire-/cable-based systems and radiocommunication systems, are addressed during their studies;

2 that the levels of radio frequency signals needed to sustain data communications over wire-/cable-based systems may exceed those that have been set on the assumption that the conducted and radiated radio frequency emissions from electrical and electronic equipment are purely incidental to the operation of the equipment and do not actually carry any communications signals or data,

recognizing

that, by virtue of the Radio Regulations and the various ITU-R and ITU-T Resolutions and Recommendations, ITU is the pre-eminent international body competent to ensure compatibility between the various uses of radio frequencies for telecommunication purposes,

is of the opinion

1 that standards developing organizations, industry alliances and manufacturers should comply with the standards, system specifications and the radio frequency operating environment established through the various ITU-R and ITU-T Recommendations when developing systems and equipment that depend on the use of radio frequencies for their operation;

2 that, in the first instance and in a spirit of cooperation, standards developing organizations, industry alliances and manufacturers should be encouraged to bring to the attention of ITU any new system or equipment requirements that depend on the use of radio frequencies in order to benefit from the expertise of the ITU in ensuring that such usage will be compatible with other uses conforming to the Radio Regulations and the extensive guidance on best practice established within the ITU Radiocommunication and Telecommunication Standardization Sectors.