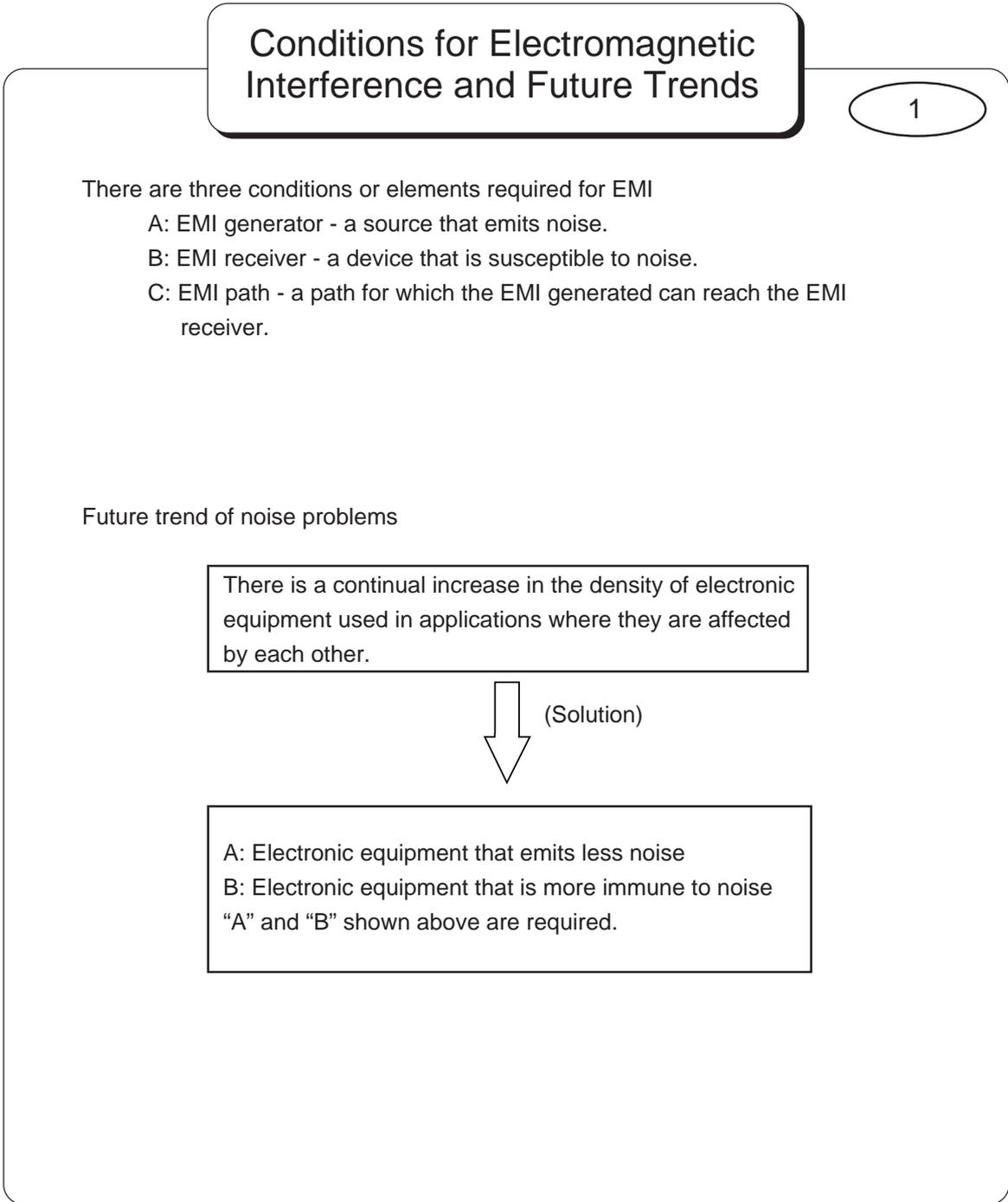


1. Reasons for Noise Suppression

1.1. Conditions for Electromagnetic Interference and Future Trends



The wide array of electronic equipment available makes our life more comfortable, and such equipment is now essential in our society. The operation of these electronic devices may be disturbed by noise interference which, in many cases, may jeopardize human life. For this reason, it is no exaggeration to say that the prevention of noise interference is an obligation to society.

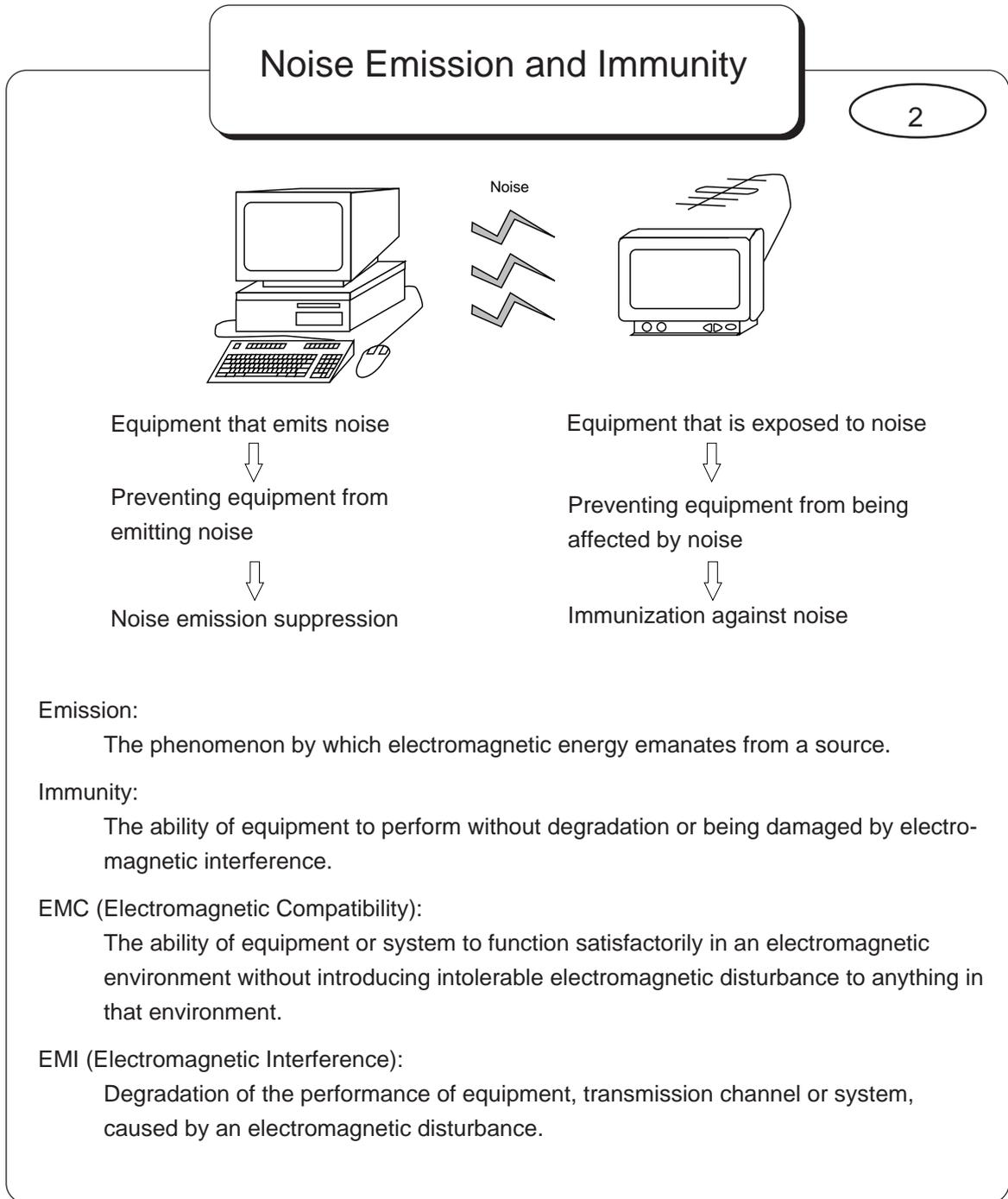
[Notes]

However, with the increasing amount of electronic equipment being used together in areas where they can affect each other, the probability of electromagnetic interference becomes higher.

Therefore, electronic equipment that emits less noise and will be in greater demand.

1. Reasons for Noise Suppression

1.2. Noise Emission and Immunity



“Preventing equipment from emitting noise” is called “suppression of emission”. “Emission” means “to emit noise from equipment”. “Preventing equipment from being affected by noise” is called “immunization against noise”. “Immunity” means “the extent to which equipment is resistant to noise without malfunctioning (degradation of performance) or being damaged”. Though “EMS” (electromagnetic susceptibility), which refers to the susceptibility of equipment to noise, is also used, “immunity” is generally used as an antonym of “emission”.

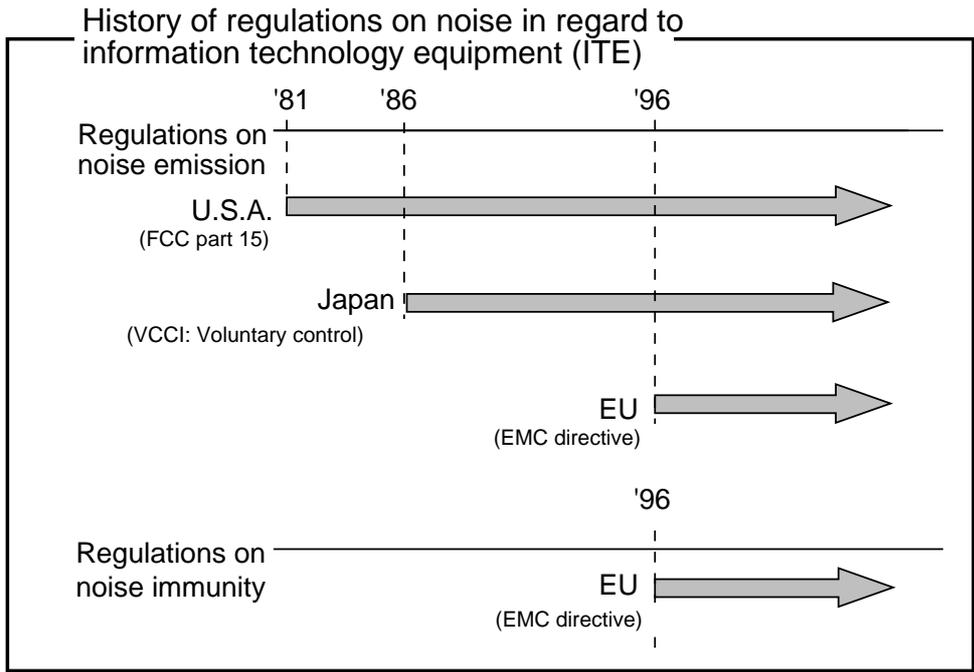
“EMC” (electromagnetic compatibility) means “equipment’s or system’s capability to prevent the equipment or system from emitting unacceptable noise externally and from malfunctioning due to noise”. “EMI” (electromagnetic interference) means “decline in the performance of equipment, transmission channels, or systems due to noise (electromagnetic disturbance) when the EMC is unsatisfactory”.

1. Reasons for Noise Suppression

1.3. Noise Regulations

Noise Regulations

3



Noise regulations are enforced in many countries. Since most of these regulations have become laws, equipment that does not comply with the regulations cannot be sold in the country. Though most of the previous regulations were intended to prevent noise emission, there is an increasing number of regulations dealing with noise immunity. These regulations state that the equipment should not degrade performance due to noise.

[Notes]