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SERIES K: PROTECTION AGAINST INTERFERENCE

High-power electromagnetic immunity guide for telecommunication systems

Recommendation ITU-T K.81

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High-power electromagnetic immunity guide for telecommunication systems

Summary

In an information security management system (ISMS) based on Recommendation ITU-T X.1051 and ISO/IEC Standards 27001 and 27002, physical security is a key issue. The electromagnetic interference caused by a high-power electromagnetic (HPEM) attack and the ability to intercept information due to unintentional electromagnetic emissions of equipment are significantly determined by the applied physical security measures.

When information security is managed, it is necessary to evaluate and mitigate the threat to either the equipment or the site. This threat is related to "vulnerability" and "confidentiality" in ISMS.

Recommendation ITU-T K.81 presents guidance on establishing the threat level presented by an intentional HPEM attack and the physical security measures that may be used to minimize this threat. ITU-T K-Supplement 5 provides the calculation results of the intentional HPEM threats. The HPEM sources considered are those presented in IEC 61000-2-13, as well as some additional sources that have emerged more recently.

Recommendation ITU-T K.81 also provides information on the vulnerability of equipment. The example of vulnerability is provided in ITU-T K-Supplement 5. The equipment is assumed to meet the immunity requirements presented in Recommendation ITU-T K.48 and relevant resistibility requirements, such as those described in Recommendations ITU-T K.20, ITU-T K.21 and ITU-T K.45.

The 2016 version of this Recommendation deletes Appendices I, II and III, which were republished as Supplement 5 to Recommendation ITU-T K.81.

History

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Electromagnetic security, high-power electromagnetic, HPEM, IEMI, immunity, resistibility, electrostatic discharge.

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Table of Contents

	Page
1 Scope.....	1
2 References.....	1
3 Definitions	2
3.1 Terms defined elsewhere	2
3.2 Terms defined in this Recommendation.....	2
4 Abbreviations and acronyms	3
5 Threat evaluation	4
5.1 Definitions of threat portability levels.....	4
5.2 Definition of the intrusion area.....	4
5.3 Definition of threat availability levels	6
5.4 Examples of threat devices	6
6 Vulnerability of devices to be protected	7
6.1 Definition of vulnerability classifications	7
6.2 Examples of vulnerability of various equipment types to be protected	8
7 Determination of EM mitigation levels	9
7.1 General	10
Bibliography.....	12

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