



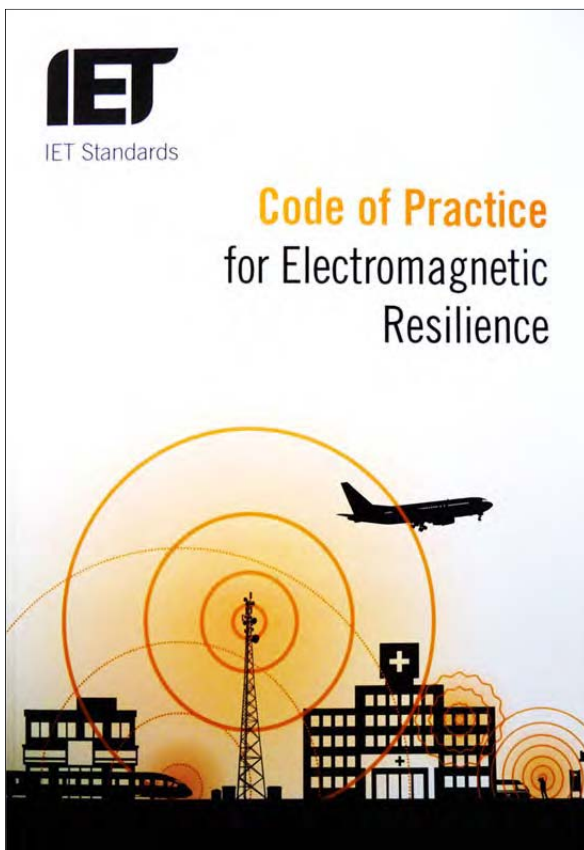
Another EMC resource
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The IET's Code of Practice on Electromagnetic
Resilience first published February 2017

Helping you solve your EMC problems

The IET's Code of Practice on Electromagnetic Resilience first published February 2017

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The direct successor to the IET's 2013 guide:
"Overview of techniques and measures related to EMC for Functional Safety"

Modern digital electronics have far too many digital states to be fully tested, and partial testing cannot predict what will happen when untested digital states occur.

This means that additional verification / validation methods must be used to ensure that

- when modern electronic systems are used in critical equipment –
- they should not suffer errors, malfunctions or failures that could cause functional safety risks (or other kinds of risks) to exceed tolerable / acceptable levels throughout their entire lifecycles.

Electromagnetic disturbances can cause electromagnetic interference (EMI) in any electronic systems.

Military, defence, and national security experts have, over decades, developed a successful approach to dealing with the risks that could be caused by EMI

when modern electronics are used in critical systems. This approach relies upon rugged, high-specification electromagnetic mitigation (shielding, filtering, transient/surge suppression, etc.) that is competently maintained throughout its operational lifecycle to continue to provide sufficient protection from external electromagnetic disturbances.

The IET's 2013 guide and 2017 Code of Practice both describe the first practical methods of ensuring that EMI should not cause modern digital systems to suffer from intolerable / unacceptable risks without the increased size, weight and costs associated with the above approach.

They replace the IET's 2008 **"Guide on EMC for Functional Safety"**, which did not describe a practical alternative.

This new practical approach is included in IEC 61000-1-2:2016; will be included in IEC 60601-1-2:2014 (Medical EMC) at its first Amendment, and is being developed into a new IEEE Standard: **"IEEE Standard Practice for Techniques and Measures to Manage Risks with Regard to Electromagnetic Disturbances"**, project reference: P1848.

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