

ITRAINONLINE MMTK

Trainers' notes: Basic Radio Physics

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Introduction	A general introduction to basic physics relevant for wireless networking.
Timing/duration	Circa 1.5 – 2 hours.
Content outline and main topics covered	<ul style="list-style-type: none">• Electromagnetic fields and waves, 15 min.• Electromagnetic spectrum, 15 min.• Radio wave propagation, 30 min.• The dB 15 min.• Examples of where physics matters 15 - ?? min. (depending on trainer!)
Target audience	General audience, IT experts.
Prerequisite skills/knowledge	No special physics knowledge assumed. Basic maths skills expected.
Unit objectives/expected outcomes	By the end of the session participants should understand and be able to apply the basic physics behind wireless networking.
Pre-workshop activities	
Notes on using exercises	Exercises to be done in groups after the full presentation.
Resources included with unit	<ul style="list-style-type: none">• Handout• Slides• Trainers' notes• List of additional resources• Exercises• Exercises with answers• Slides with exercises• Materials evaluation• Workshop evaluation• Copyright statement•
Additional trainer resources	

Equipment needed	<ul style="list-style-type: none"> • PC and LCD or overhead projector • Whiteboard, pens. • Poster “Guide to the Airwaves”. • Optional: a piece of rope or cable to demonstrate waves)
Comments	Unit has been successfully used in general wireless training, in order to supply the most basic background.