



## VNA Tools – advanced user workshop

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Subject	VNA expert day
Document version	v.01
Instructors	Johannes Hoffmann, Michael Wollensack, Marko Zeier, Peter Hürlimann, Jürg Rüfenacht
Organisation	METAS
Date	09. November 2018 (09:00 – 17:00), <b>please arrive by 08:45</b>
Location	METAS, meeting room HB20

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### Welcome (Marko and Juerg)

- VNA Expert Day - Introduction
- Detailed S-parameter traceability steps used during the primary experiments.

### Theory part (Johannes and Peter)

- Reference Plane Definition: Possibilities and Consequences.
- Connector Model: Parameterization and Simulation.
- The Model of Coaxial Shorts with Rough Surfaces.
- The Model of Air Lines with Rough Surfaces

### VNA Tools (Michael)

- *PrimaryOffsetShortStandard* and *PrimaryLineStandard*.
- Connector data files (format, naming convention, location).
- The new implemented optimization calibration.
- How to define an over-determined primary traceability experiment (multiline, offset shorts).
- *VNA Tools* – software validation and verification.

### Good measurement practice (Juerg)

- Dimensional characterizations of the coaxial primary standards.
- How to prepare and run a primary traceability experiment (optimization of the VNA set-up and the measurement procedure).

### Round table discussions and wrapping-up meeting (Marko and all)

**Note:** this training is free for participants of a VNA Tools training course.