



# DKD and the **D**CC

Temadag om digitale kalibreringscertifikater (**D**CC)

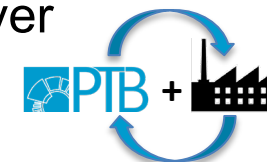
T. Krah, Dep. 9.4  
M. Czaske, W. Schmid, Section 9.11



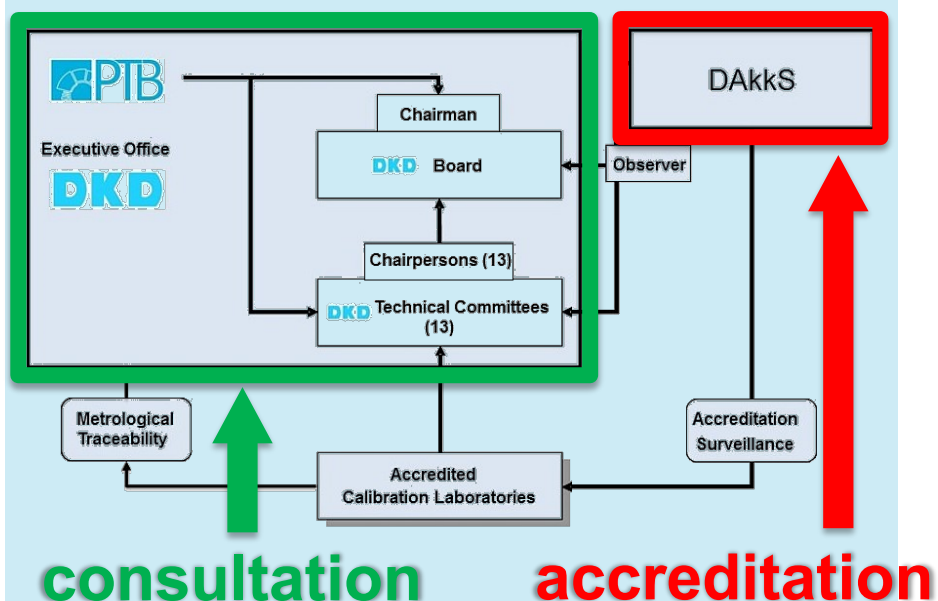
## What is the **DKD**?

# What is the DKD?

- Abbreviation for **D**eutscher **K**alibrier**d**ienst (German Calibration Service)
- Is a board of PTB for the **technical exchange** between PTB and over 500 accredited calibration laboratories.



## Structure



## Tasks

- Develops calibration guidelines and good practice guides.
- Actively participates in setting international rules in the field of calibration.
- Facilitates the metrological infrastructure in the sense of the propagation of the units.
- Offers workshops and courses for the DKD members.
- Promotes interlaboratory comparisons.



# What is the DKD?

## Technical committees

1. Direct Current and Low Frequency
2. High Frequency and Optics
3. Force, Acceleration and Acoustics
4. Length
5. Temperature and Humidity
6. Pressure and Vacuum
7. Mass and Weighing Instruments
8. Chemical Measurands and Material Properties
9. Materials Testing Machines
10. Torque
11. Flow Measurands
12. Measurands in Laboratory Medicine
13. Measurement Uncertainty



## What are the TCs doing?

- Preparing calibration guidelines at national level.
- Discuss good practice in calibration based on latest state of technology. → Regularly reviewing existing calibration guidelines.
- Informing members about developments in the field of calibration.



## DKD and the DCC



# Why is the DKD dealing with the **DCC**?

## DKD's goals for the **DCC**



- Bring calibration to the 21st century via digitalisation.
- Disseminating clear, unambiguous, and error free calibration data.
- Supporting a faster usability of calibration data by automatisisation.
- Achieve widely harmonised **DCC** for all metrology fields and users.

## Why is DKD best suited for contributing to the goals?



- DKD brings together expert knowledge from fundamental metrology (PTB) and industrial practitioners.
- DKD covers all relevant metrology areas.
- DKDs cross-sectoral cooperation fosters harmonisation and at the same time shapes subject-specific **DCCs**.

# Current activities of the DKD

## Work within the committees



- Sub-committees created focussing on **DCC** development.
- Development of **DCCs** for particularly relevant measurands and measurement equipment types.
- **Output:**
  - Good practices (templates) for selected important measurands.
  - Expert reports.
  - Harmonised wording.



# Current activities of the DKD

Measurand	Harmonised wording	Good practice	Expert report
Mass	✓	✓✓	✓✓
Scales	✓	✓	✓
Temperature	✓	✓	✓
Humidity	✓	✓	✓
Length	✓	✓	✓
Force	✓	✓	✓
Torque	✓	✓	✓
Air pressure	✓	✓	
Electr. measurands	✓	✓	
Chem. measurands	✓	✓	
Laboratory medicine	✓	✓	



Ready to use

Work started

Planning started

[www.ptb.de/cms/en/metrological-services/dkd/publications.html](http://www.ptb.de/cms/en/metrological-services/dkd/publications.html) → tab *Expert Reports*

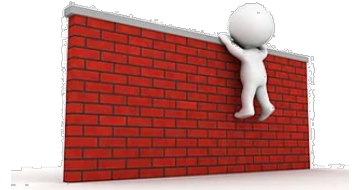




# Current activities of the DKD

## Work beyond the committees:

- Aligning with the German accreditation body about accreditation requirements.

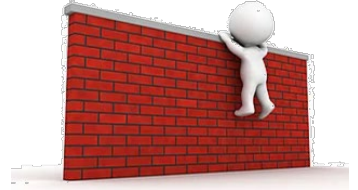


## International cooperation

# Current activities of the DKD

## Work beyond the committees:

- Exchange with SIM group SIM-BID-THB DEMO.
- Exchange with guest researchers (INTI, CENAM)



## Outlook

## Goal for Germany:



- Developing a harmonised concept for the **D**CC which will be used within the German accreditation.
- Continue the collaboration with the German accreditation body.
- Expand the concept to all measurands and measurement equipment types.

## Goal internationally:



- Harmonisation on world wide level.
- Expand concept to all measurands.



## **DCC User Forum:**

<https://digital.ptb.de/dcc-user-forum>

Wednesdays 9:00-10:00 & 16:00-17:00 CET

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