



bioenergy2020+



# Gas Analysis Workshop 2013

## Tar & sulphur sampling and analysis

21<sup>st</sup> EU BMC+E, Bella Center, Copenhagen, 6<sup>th</sup> June 2013

- Where do we come from? - Previous workshops
- Where are we today?
- Where do we want to go?
  - How to take action?

Förderprogramm:



Ein Förderprogramm der:



Gefördert von:



## Protokoll

### Workshop zum Messen von Teer

- Teermessung an Holzvergassungs-Motor-BHKW -

am

Montag, den 12. April 2010

in der

**TU Berlin**

**Institut für Energietechnik, FG EVUR**

Raum RDH 45, Fasanenstr. 89, 10623 Berlin

## 2011 Berlin

### Measurement, Analysis and Monitoring of Condensable Gas Components (especially Tar) in Product-Gases from Biomass Gasification and Pyrolysis



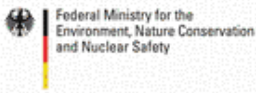
Measurement, Analysis and Monitoring of Condensable Gas Components (especially Tar) in Product-Gases from Biomass Gasification and Pyrolysis

International Workshop  
June 8<sup>th</sup> 2011 at 19<sup>th</sup> EU BC+E, 10.00 – 16.30, ICC Berlin

Financially supported by:



funding program



funded by



## 2012 Milan

### Workshop on Sampling, Detection and Quantification of Impurities in Gases from Thermochemical Biomass Conversion Processes - “Gas Analysis Workshop”



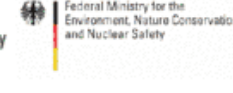
Workshop on Sampling, Detection and Quantification of Impurities in Gases from Thermochemical Biomass Conversion Processes - “Gas Analysis Workshop”

International Workshop  
June 21<sup>st</sup> 2012 at 20<sup>th</sup> EU Biomass Conference and Exhibition, 10.00 – 18.00, MiCo Milano

Financially supported by:



funding program



funded by



<http://www.ezur.tu-berlin.de/menue/forschung/veranstaltungen/>

**Coming together is a beginning;  
keeping together is progress;  
working together is success.**

Henry Ford (1863-1947)



bioenergy2020+



energie atomique • énergies alternatives



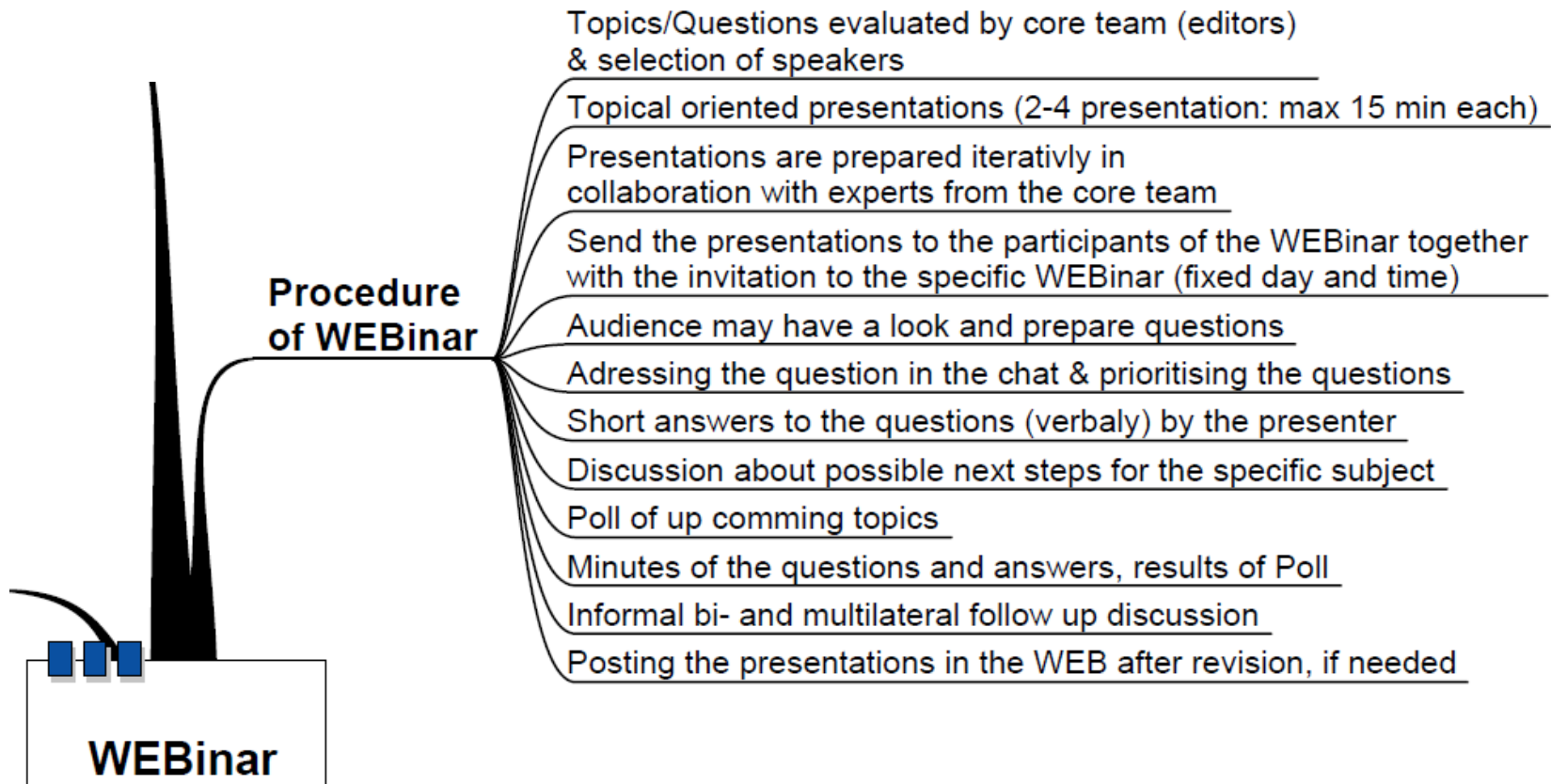
dépasser les frontières

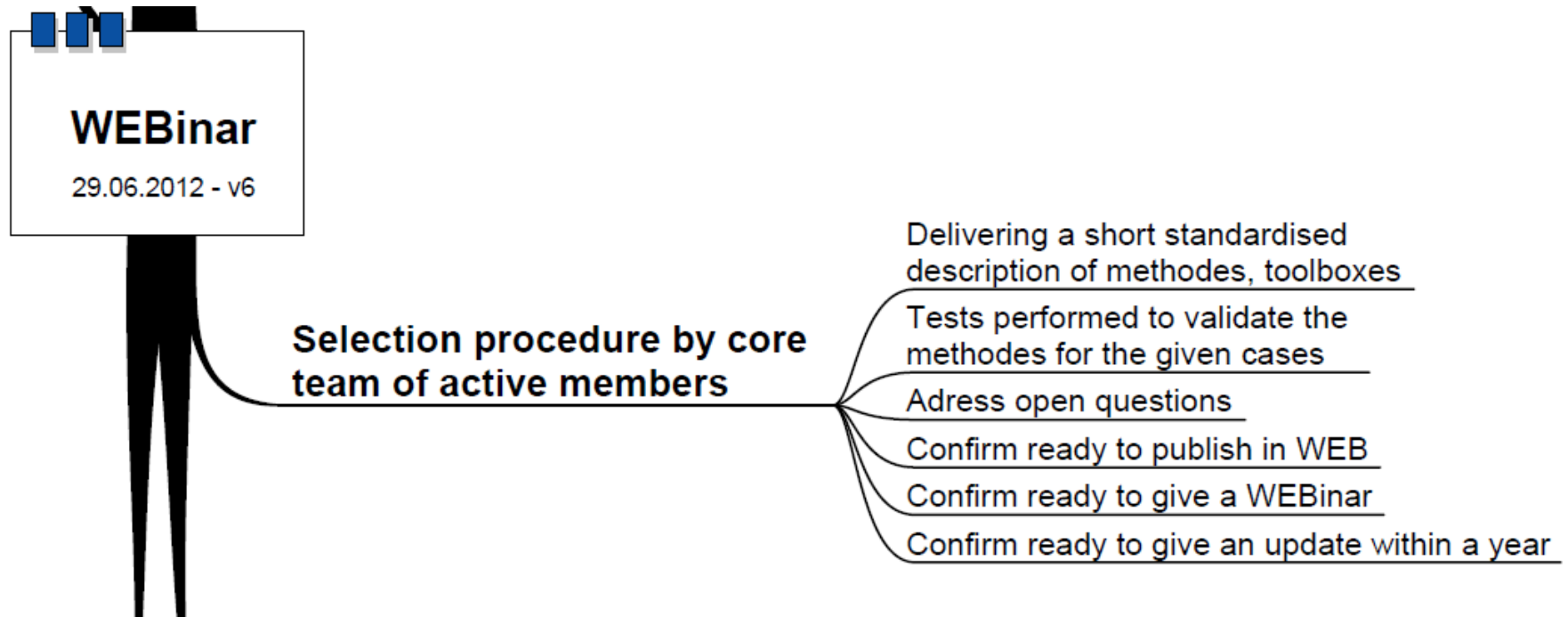


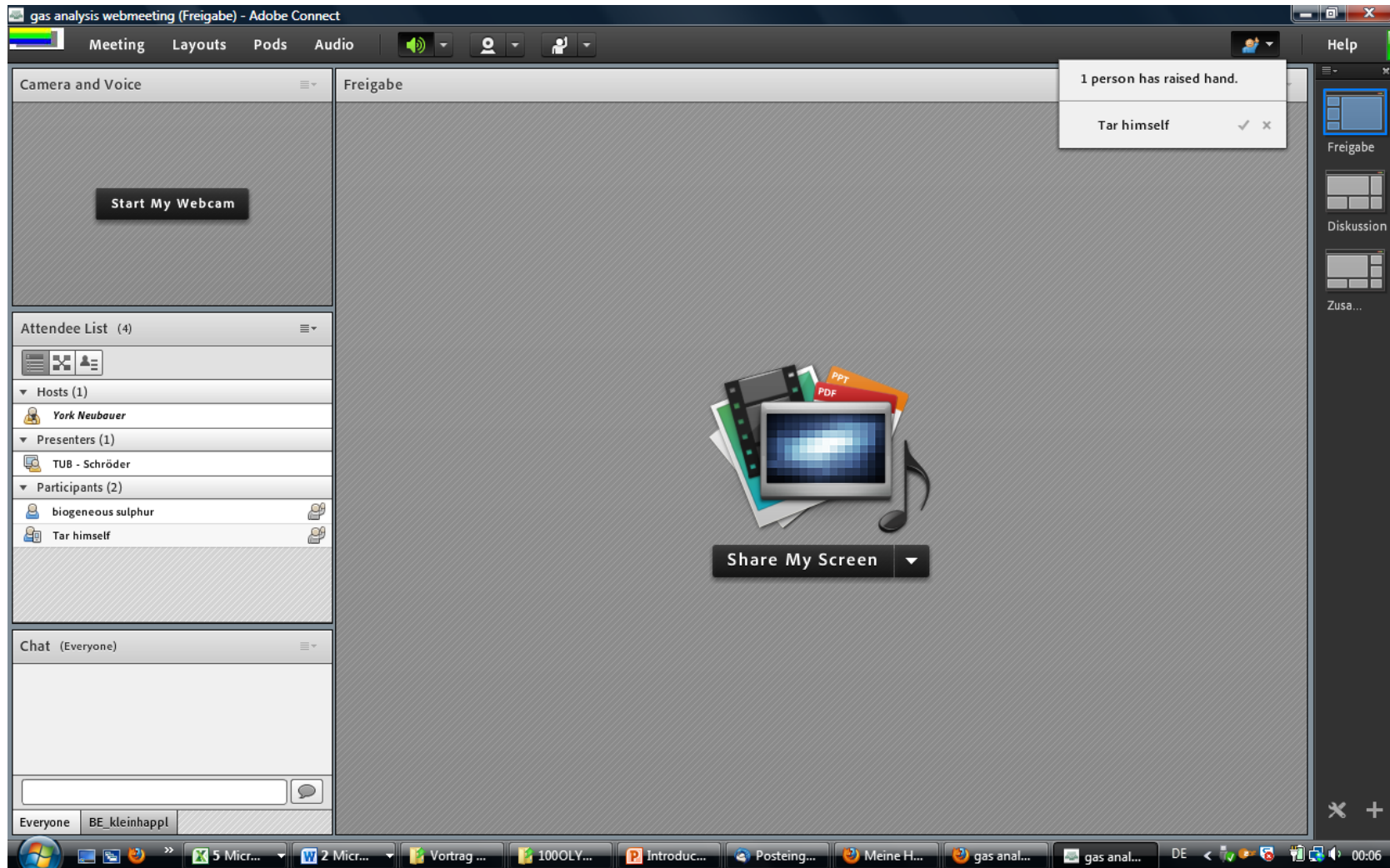
- **Exchange of information and experiences (webinars / further meetings)**
- **Collaborative work (round robins)**
- **Improving existing methods where necessary (CEN/TS)**
- **Create repeatable and reproducible results**
- **Establish quality measures regarding analytics**

- **Exchange of information and experiences (webinars)**
  - Group of editors (experts on specific topics)
  - one webinar - one topic
  - 2-4 presenters on a topic max,
  - 1 hour presentation – 15 min each
  - ‚discussion‘ – questions
- Presentations will be made available via internet









gas analysis webmeeting (Freigabe) - Adobe Connect

Meeting    Layouts    Pods    Audio

Freigabe - TUB - Schröder

Request Control    Full Screen

Start My Webcam

Attendee List (4)

- Hosts (1)
  - York Neubauer
- Presenters (1)
  - TUB - Schröder
- Participants (2)
  - biogeneous sulphur
  - Tar himself

Chat (Everyone)

Everyone    BE\_kleinhappl

130092\_BMC\_2013\_PSC\_Printout.pdf - Adobe Reader

benzene    naphthalene    a)     $\eta = 99 \text{ mass-\%}$      $\eta = 53 \text{ mass-\%}$      $\eta = 28 \text{ mass-\%}$

intensity [counts - arbitrary unit]

retention time [min]

benzene    naphthalene    b)

Efficiency (%)

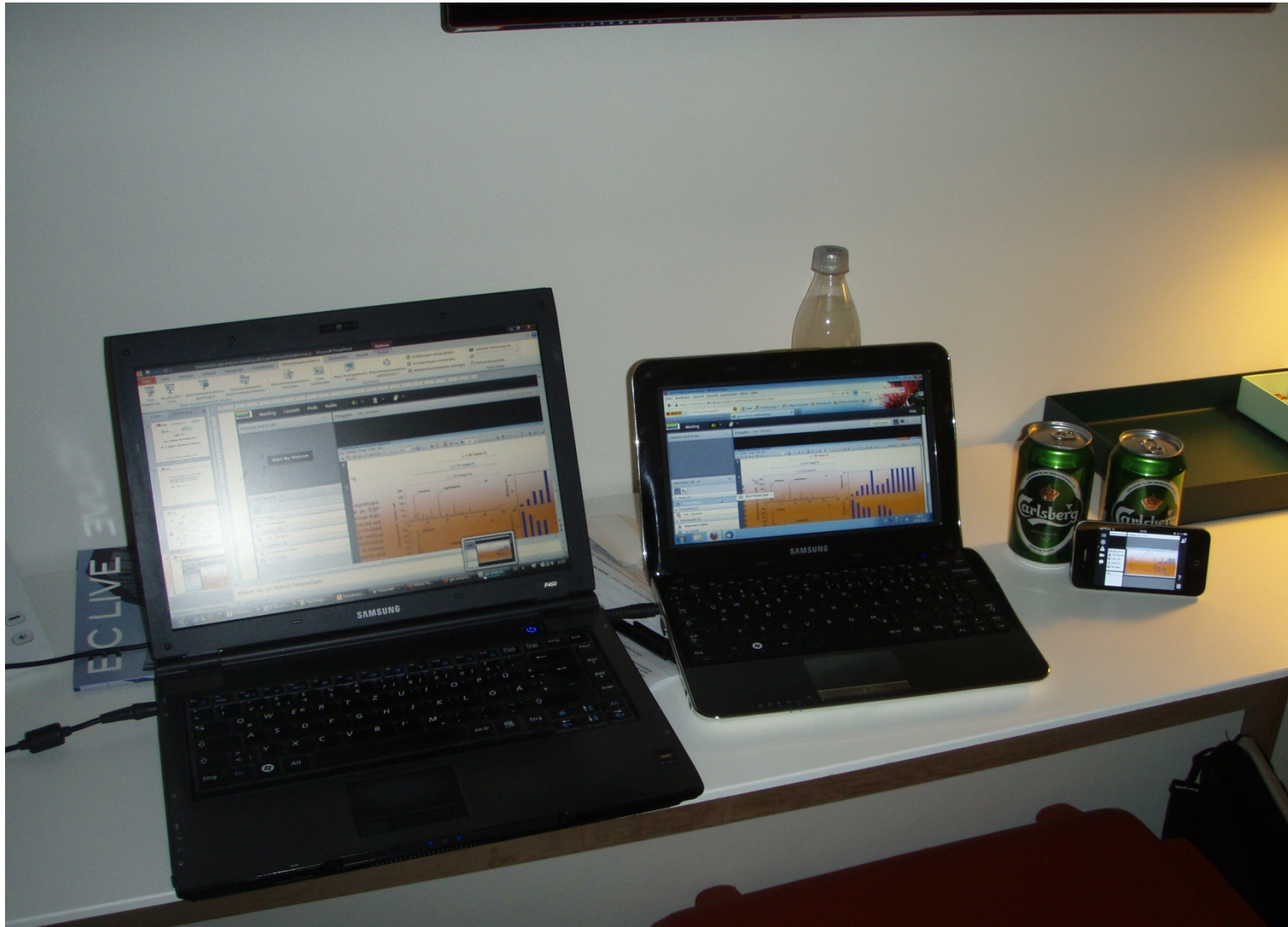
Penetration (%)

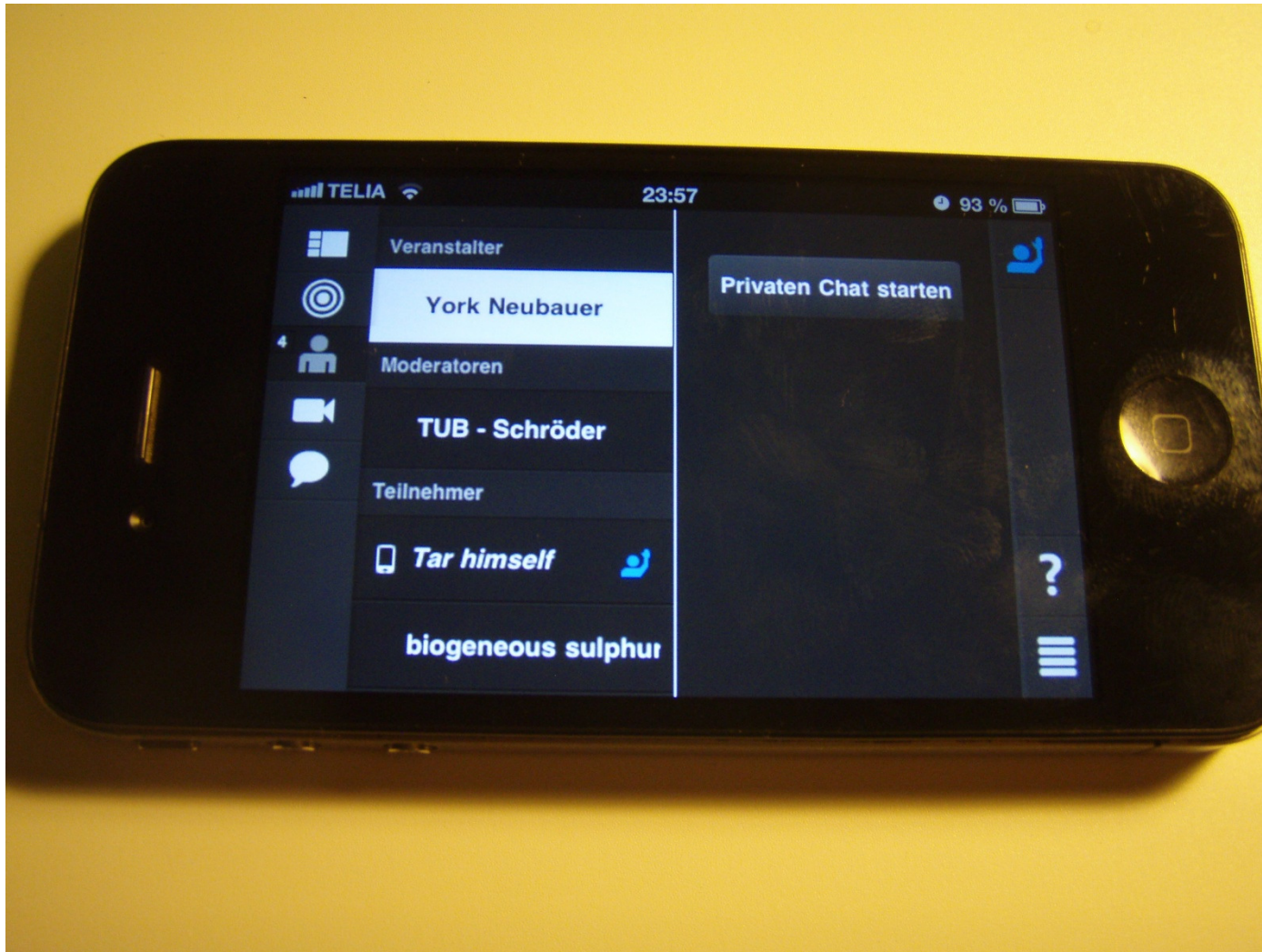
benzene    toluene    xylene    ethylene    phenol    benzofuran    indane    Naphthalene    2-methylnaphthalene    1-methylnaphthalene    acenaphthylene    phteranthrene    anthracene

significant of an ESP promise their edures are accumulated est method tmination to assess stance and

tar deposits lean

23:49





Dear Colleagues,

here the details for logging in into this morning's webmeeting at 10.00 CET.

you find the meeting room under this link:

[https://webconf.vc.dfn.de/gas\\_analysis\\_webmeeting/](https://webconf.vc.dfn.de/gas_analysis_webmeeting/)

To connect your audio via telephone choose one of the two dial-in numbers listed below:

Germany - Berlin: +49-30-25410XX

Germany - Stuttgart: +49-711-63301XY

After the message type in the conference room number '**87230468**' followed by '#' into your telephone.

Access via headset is also possible. For this just connect on the website.

Note: At the moment the system gives me an error message regarding the telephone access.... I am working on it.

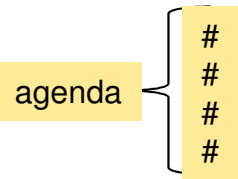
Best regards

York

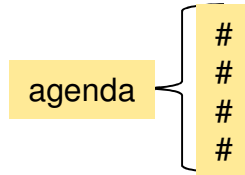


# Webinars

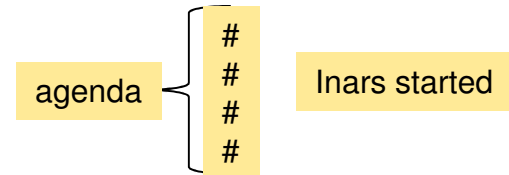
## Convent. Tar & particle



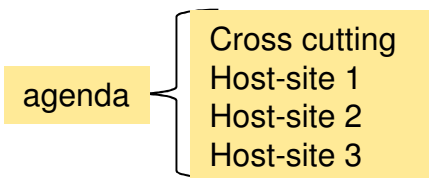
## Quantification of Water, Treatment of Sample Gas ,Gasanalysis'



## Sulphur-Organics

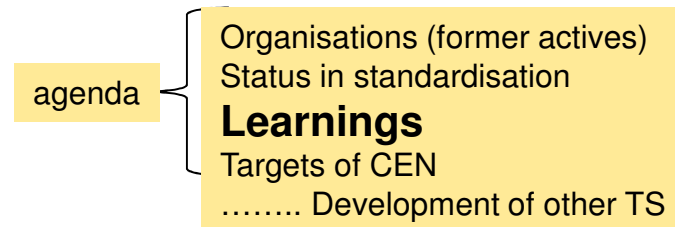


## Host-sites Round-Robin-tests

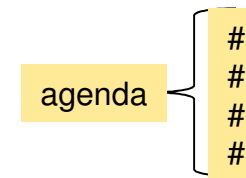


Webinars started

## Update CEN /TS



## Testgas-generators





Experts to serve as editors for the webinars needed !

e. g.

- FTIR application,

  - sampling analysis with  $\mu$ -GC,

    - water content analysis

      - heavy tars

        - SPA sampling and analysis

          - .....

Round robin testing and  
joint measurements to compare different analytical methods  
will be topic of the presentations in the afternoon.

**Thank you!**