# ITU-T Workshop on
## "From Speech to Audio: bandwidth extension, binaural perception"
**Lannion, France, 10-12 September 2008**

## Session 2: Modeling: binaural, spatialization

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# Highlights from Presentation 2.1 "Creation of test material that simulates the stereo capture of a teleconference site"

- Requirements on stimuli:
  - Several speakers
  - (changing) position
  - back ground noise
- Generation of stimuli:
  - (Live recording)
  - Flexible simulation based on
    - Recording of IR of venue
    - Recording of background noise in same venue
    - Anechoic recordings of speech

# Highlights from Presentation 2.2 “Spatial audio conferencing”

- Review of research on binaural and spatial audio conferencing at BT
  - Improved experience
  - Demand from testers `where to buy´
- Discussion of network structures for multipoint audio conferencing
  - local, central or distributed processing
- Outline of European project TA2
  - Interactive audiovisual scenes

# Highlights from Presentation 2.3 “3D telephony”

- Simulation of 3D sound sources with room reflections
- First results on the quality (ease of listening) for different layouts

# Conclusions / Recommendations

- Start studying transmission formats for spatial audio for audio conferencing and teleconference applications
- Take into account the flexible positioning of audio objects
- Start studying test methods for the evaluation of spatial audio systems with/without natural background