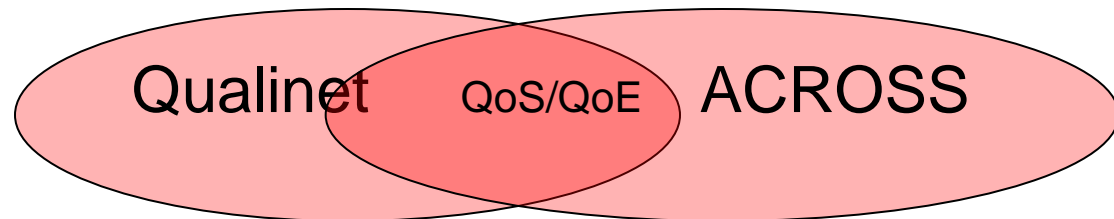


Relationship between Qualinet and ACROSS-leveraging Qualinet



Peter Pocta, University of Zilina, Slovakia

- A quality definition
 - An overview of quality assessment principles
 - An introduction to Qualinet
 - Common themes across Qualinet and ACROSS
 - How Across can leverage knowledge obtained in Qualinet
-

Quality accor. to Jekosch:

➤ *is the result of the judgment of the perceived composition of an entity with respect to its desired composition*
[Jekosch, U.: Voice and Speech Quality Perception: Assessment and Evaluation, Springer, 2005]

- ✓ **Perceived composition:** Totality of features of an entity. Signal for the identity of the entity to visible to the perceiver
- ✓ **Entity:** Material or immaterial object under observation
- ✓ **Desired Composition:** Totality of features of individual expectations and/or relevant demands and/or social requirements
- ✓ **Feature:** Recognizable and nameable characteristic of an entity

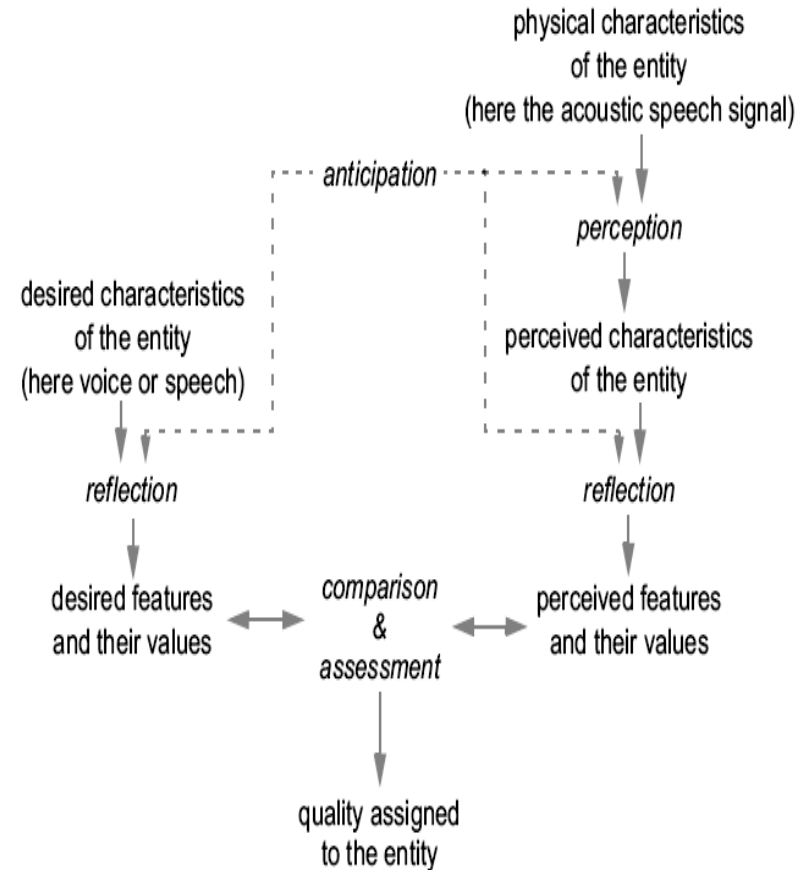


Fig.1: A schematic description of quality event (especially speech quality event)
– adopted from Jekosch 2005

Quality according to Qualinet:

- *is the outcome of an individual's comparison and judgment process.*
 - It includes perception, reflection about the perception, and the description of the outcome.
 - Quality is considered here in terms of the evaluated excellence or goodness, the degree of need fulfillment, and in terms of a “quality event” (see Jekosch, 2005).
 - Event: An observable occurrence. An event is determined in space (i.e. where it occurs), time (i.e. when it occurs), and character (i.e. what can be observed).

from [Qualinet White Paper on Definitions of Quality of Experience](#)

- **Subjective Testing:**

- ❑ Test subjects (group of people, mainly around 24)
- ❑ Advantage: higher validity and reliability of results
- ❑ Drawback: Time-consuming and costly

- **Objective Testing (Signal-based):**

- ❑ Algorithms (PESQ, P.563, POLQA (P.863), etc.)
- ❑ Good correlation with subjective tests (PESQ: 0.9; P.563: 0.7)

- **Parametric Testing (Parameter-based):**

- ❑ Parametric or computational models (based on equations, E-model)
- ❑ Mainly, weaker correlation with subjective test than objective methods (highly depends on impairment)

- **General information:**

- COST IC1003 action
- European Network on Quality of Experience in Multimedia Systems and Services
- Duration: 11/2011-11/2014
- Involving 27 COST countries, 1 COST Near Neighbour Countries (Montenegro) and 5 COST International Partner Countries (USA, Canada, Australia, Japan, Singapore)
- Work has been organized in 5 Working Groups (WG):
 - WG1 - Application areas
 - WG2 - Mechanisms and models of human perception
 - WG3 - Quality metrics
 - WG4 - Databases and validation
 - WG5 - Standardization and dissemination
- To focus on special tasks, each WG has created a Task Force (TF) dedicated to a particular task, for instance TF 2D/3D video and streaming created by WG1 for dealing with 2D/3D video and streaming

- **Most relevant Qualinet TFs for ACROSS:**
 - QoE management from a networking perspective
 - Machine Learning for objective assessment of QoE
 - Cloud-Web-applications
 - 2D/3D video and streaming
 - Gender as a QoE Influencing Factor
 - Crowdsourcing

The objectives and other details related to the above-listed TFs can be found in the embedded document:



QUALINET – EUROPEAN NETWORK ON QUALITY OF EXPERIENCE
IN MULTIMEDIA SYSTEMS AND SERVICES
COST ACTION IC1003
HTTP://WWW.QUALINET.EU

**Document: Qo0494 Approved Qualinet
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Contents	
WG1/Gaming	2
WG1/QoE management from a networking perspective	2
WG1/Cloud-Web-applications	3
WG1/2D/3D video and streaming	4
WG2/ Gender as a QoE Influencing Factor	4
WG2/Crowdsourcing	5
WG2/QoE in Medical Imaging and Healthcare	5
WG2/Emotional state	6
WG3/Machine Learning for objective assessment of QoE	6
WG3/NDR	6
WG4/Validation Methods	7
WG4/Qualinet Databases - Dissemination and Standardization	8
WG5 Task Force on Certification	9
WG5/Joint Task Force between Qualinet and 3D ConTourNet	9
WG5/ QoE Journal Task Force	10
WG5/ VQEG	10
WG5/ Dissemination and Outreach	11
WG5/ ITU-T SG 12	11

- **Qualinet databases:**

- freely accessible under: <http://dbq.multimediatech.cz/> (registration required)
- 201 databases (image quality, video quality, eye-tracking, audiovisual, etc.)

The current list and basic descriptions of the available Qualinet datasets can be found in the embedded document:



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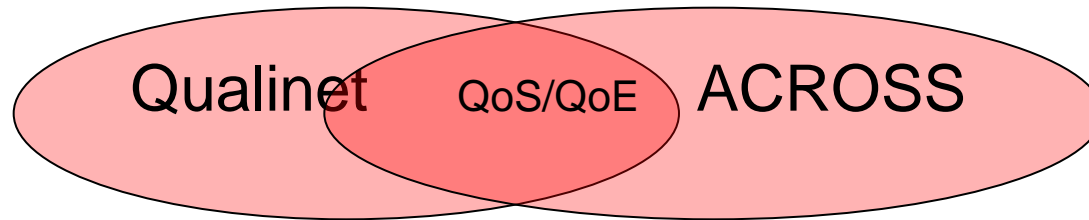
QUALINET Multimedia Databases v5.5

Introduction
This document is an updated version of the previous "QUALINET Multimedia Databases v5.0", which lists and summarizes basic description of available multimedia databases based on literature search and on the feedback from the Qualinet partners. This document is intended to be used as offline version of the "QUALINET Multimedia Databases Online." Qualinet's (<http://www.qualinet.eu>) main resource for sharing of the datasets among Qualinet members and scientific community. For the recent information on the registered datasets please refer to "Qualinet Databases" (<http://dbq.multimediatech.cz/>).
The listed databases focus mainly on the publicly available audiovisual media content - annotated with subjective ratings - as well as on select databases with content with no subjective ratings, and on some databases with special content.
Each database in this document is annotated by its Title, Link, Description, Access information, Copyright notice provided by the database owner, Requested citation text for publications, Contact information and associated References. There is also information if the database was created by one of the current Qualinet partner institutions.
The initial resource used to create basis of this overview was, in March 2011, the website by Stefan Winkler (Win11). Further datasets were since then reported by the Qualinet partners.
Comments or questions regarding the "Qualinet Databases" should be directed to Karel Fliegel (fliegek@fel.cvut.cz), Qualinet WG4 deputy leader.

Contents	
QUALINET Multimedia Databases v5.5	1
1 Annotated Multimedia Quality Databases	6
1.1 Annotated Image Quality Databases	6
1.1.1 LIVE Image Quality Assessment Database	6
1.1.2 LIVE Multiply Distorted Image Quality Database	7
1.1.3 Tampere Image Database (TID2008)	8
1.1.4 Tampere Image Database (TID2013)	8
1.1.5 MICT Image Quality Database	9
1.1.6 IRCCyN/IVC Image Quality Database	9
1.1.7 IRCCyN/IVC Scores on Toyama (MICT) Database	10
1.1.8 IRCCyN/IVC DIBR Images Database	11

- **How we can benefit from Qualinet?**
 - Access to & Building on knowledge obtained in Qualinet, especially in the most relevant TFs
 - Deploying Qualinet databases in a development process of QoE monitoring models in ACROSS
 - **Creating TF (> 1?) focusing on QoS/QoE issues in ACROSS**

- **TF focusing on QoS/QoE issues**
 - Proposed by Qualinet members, namely Hugh Melvin, Peter Pocta, Lea Skopin-Kapov, Tobias Hossfeld and Andrej Zgank
 - **Aim:** To examine & develop a range of research topics in QoS/QoE area
 - **Hot research topics to be prospectively covered by this TF proposed by the founding group (telco TUE evening):**
 - A context-based QoE monitoring
 - A service-specific QoE estimation models for SDN
 - A cross-layer QoE management
 - Time-aware applications, computers and communication systems



Thank you for your attention !

Questions ?