

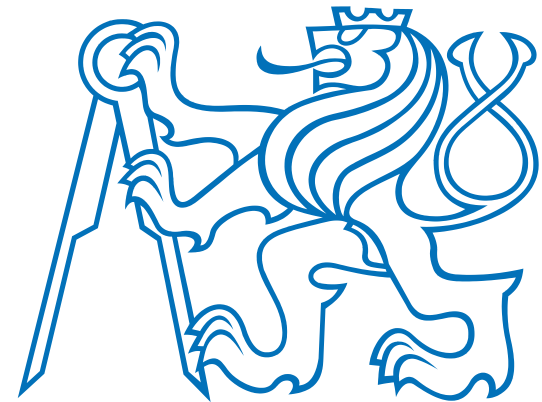
CZECH TECHNICAL UNIVERSITY IN
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Research Areas

- Sensors and Magnetic Measurement
- Aircraft and Space Instrumentation
- Automotive Electronics
- Human Factors and Biomedical Measurements
- Digitization and Signal Processing
- Electromagnetic Compatibility
- Metrology of Electrical Quantities
- Videometry and Microprocessors
- Diagnostics and Non-destructive Testing
- Distributed and Embedded Systems

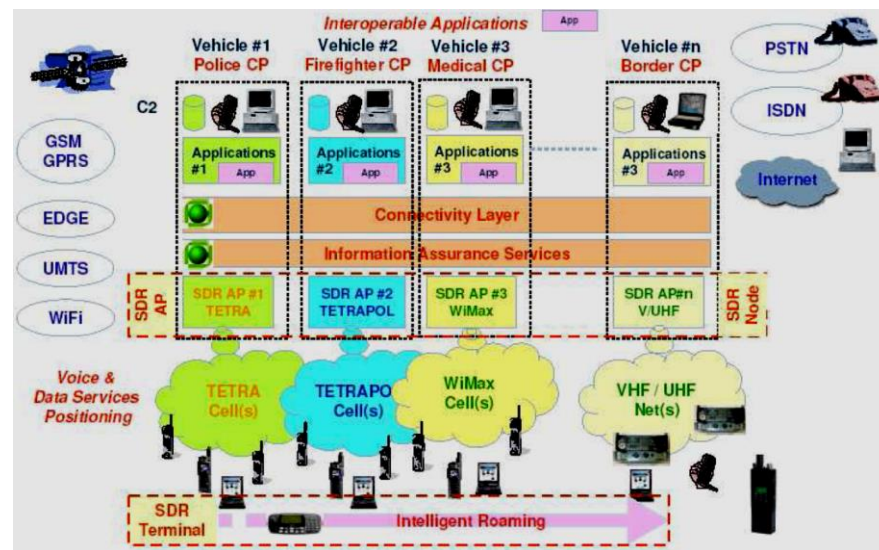
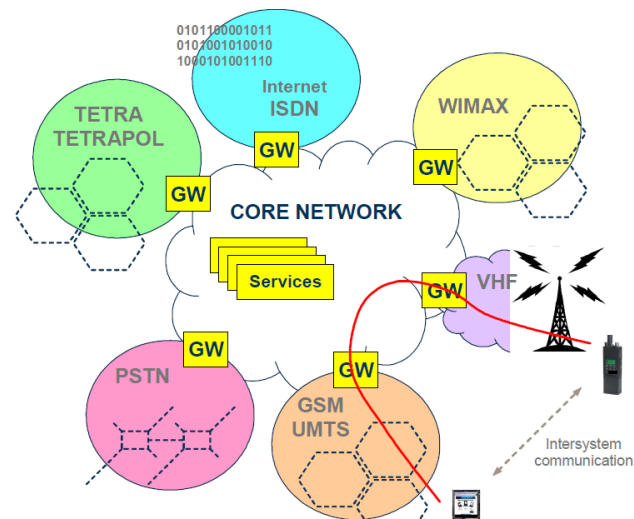
QoS, QoE and Human Factors

- End-to-end QoS for secure and low bit-rate connections (incl. MELPe)
- Today: network-centric world, connections are established across multiple heterogeneous networks, permanent QoS monitoring mandatory
- For defense organisations, telecom/IT services are usually provided by separate entities – Defense Information Services Agency (DISA) for US, NCIA for NATO. That strictly requires users to measure the received QoS
- We provide expertise on QoS and QoE, demonstrations, subjective testing of intelligibility, quality and usability (including parallel task testing and cases under special conditions), objective methods development



Selected Projects & Results

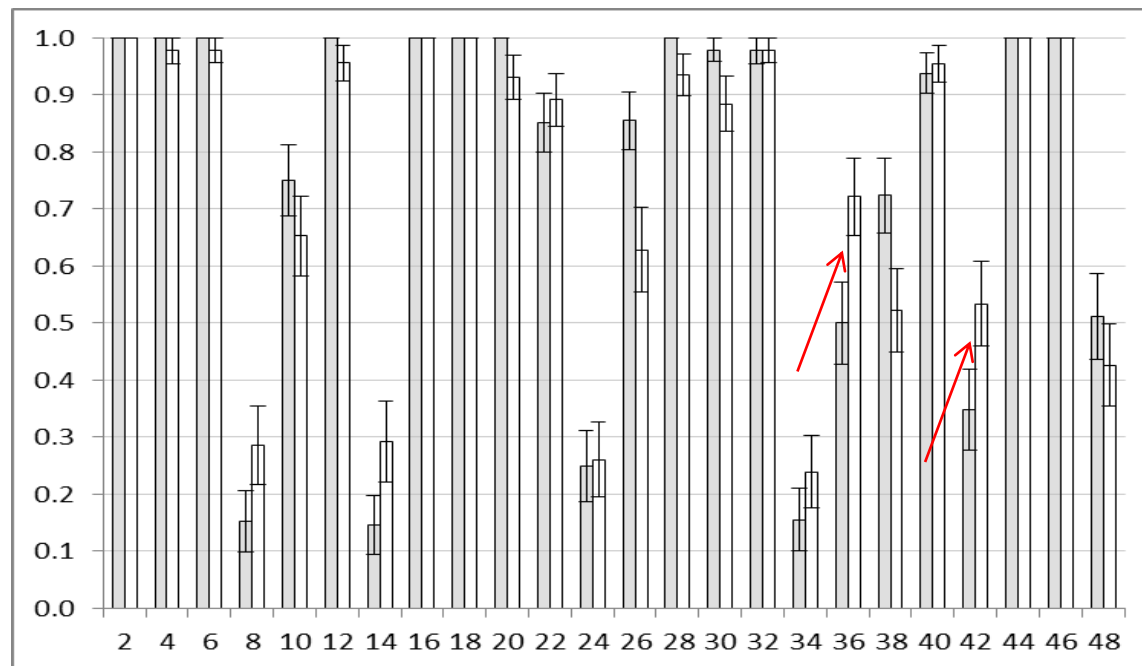
- **WINTSEC:** Wireless INTeroperability for SECurity - Interoperability of wireless communication systems among security services, international cooperation of 23 organizations.
- HOLUB, J. and STREET, M.D. Impact of End to End Encryption on GSM Speech Transmission Quality - a Case Study. The 2nd IEE Secure Mobile Comm Forum. London, 2004. ISSN 0537-9989.
- **ONR Grant:** HOLUB, J., AVETISYAN, H., and ISABELLE, S. Subjective speech quality measurement repeatability: comparison of laboratory test results. International Journal of Speech Technology. 2017, 20(1), pp. 69-74. ISSN 1381-2416



Subjektivní testy kvality a srozumitelnosti přenesené řeči s paralelní zátěží



Paradoxní výsledky testů s paralelní zátěží – srozumitelnost vzorků



ETSI TR 103 503 : Speech and Multimedia Transmission Quality (STQ); Procedures for Multimedia Transmission Quality Testing, 2018, dostupné z:

https://portal.etsi.org/webapp/WorkProgram/Report_WorkItem.asp?WKI_ID=51341

Předkladatelé: HOLUB, J., SLAVATA, O., a AVETISYAN, H.

Vybrané publikace 2018

HOLUB, J., et al. Subjective audio quality testing, with tasting and car driving as parallel task [online]. *IEEE Access*. 2018, **2018**(2018), s. 60769-60775. ISSN 2169-3536.

AVETISYAN, H. a HOLUB, J. Subjective Speech Quality Measurement with and without Parallel Task: Laboratory Test Results Comparison [online]. *PLoS ONE*. 2018, **13**(7)ISSN 1932-6203. Dostupné z:<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0199787>

AVETISYAN, H., DRÁBEK, T., a HOLUB, J. Low Bit-rate Coded Speech Intelligibility Tested with Parallel Task. *ACTA ACUSTICA UNITED WITH ACUSTICA*. 2018, **104**(4), s. 678-684. ISSN 1610-1928. Dostupné z:
<http://www.ingentaconnect.com/contentone/dav/aaua/2018/00000104/00000004/art00013>

BRUNA, O., LEVORA, T., a HOLUB, J. Assessment of ECG and respiration recordings from simulated emergency landings of ultra light aircraft [online]. *Scientific Reports*. 2018, **8**(1038), ISSN 2045-2322. Dostupné z: <http://www.nature.com/articles/s41598-018-25528-z.pdf>

HOLUB, J., et al. Subjective Testing of Car Audio Systems With and Without Parallel Task [online]. In: *DAGA 2018*. DAGA 2018. Mnichov, 19.03.2108 - 22.03.2018. Berlin: German Acoustical Society (DEGA). 2018, s. 1788-1791. ISBN 978-3-939296-13-3. Dostupné z:
https://www.head-acoustics.de/downloads/messen/HEAD_acoustics_DAGA_Abstract_Car_Audio_System_Testing.pdf