Speaker Comparison for Forensic and Investigative Applications II

Jean-François Bonastre, LIA, Avignon University, France
Joseph P. Campbell, MIT Lincoln Laboratory, USA
Anders Eriksson, Stockholm University, Sweden
Hirotaka “Hiro” Nakasone, Federal Bureau of Investigation, USA [ret.]
Reva Schwartz, National Institute of Standards and Technology, USA
Background

- In speaker comparison, speech samples are compared by humans and/or machines for use in
  - Investigations
  - Court to address questions that are of interest to the legal system
- Speaker comparison is a high-stakes application that can change people’s lives
  - Demands the best that science has to offer
  - Methods, processes, and practices vary widely
    - Not necessarily for the better
    - Not generally appreciated and acted upon
- Methods, processes, and practices grounded in science are critical for the proper application (and nonapplication) of speaker comparison to a variety of international investigative and forensic applications
Objectives

- Improve understanding of speaker comparison for investigative and forensic application
  - Describe what is currently being done
  - Critically analyze performance and lessons learned
- Improve communications between communities of researchers, legal scholars, and practitioners internationally
  - Directly address some central legal, policy, and societal questions
    - Allowing speaker comparisons in court
    - Requirements for examiners and expert witnesses
    - Requirements for validation of specific automatic and/or human-based methods) – all at the international level!
- Present and discuss current practices
  - How to move to adopting best practices
    - Method validation
    - Reduction of bias
    - Presentation of evidence
Distinguished Opinion Presenters

- *Dorothy Glancy*, Santa Clara University School of Law, USA
- *Kenneth Marr*, Federal Bureau of Investigation, USA
- *Jonas Lindh*, Voxalys AB & Inst of Neuro & Phys, U Gothenburg, Sweden
- *George Doddington*, Consultant, USA
- *John H.L. Hansen*, University of Texas at Dallas, USA
  - *Ewald Enzinger*, Independent forensic consultant, USA
  - *James Wayman*, San José State University, USA
    - *Douglas Reynolds*, MIT Lincoln Laboratory, USA
    - *Michael Coble*, *National Institute of Standards and Technology, USA
    - *Christopher Cieri*, Linguistic Data Consortium, USA
    - *Luis Buera*, Agnitio Voice ID, Spain
    - *Alysha Jeans*, Federal Bureau of Investigation, USA
    - *Mitchell McLaren*, SRI International, Menlo Park, CA, USA

Key:
- Topic 1: What is currently possible in forensic speaker comparison and recognition?
  - Topic 2. Quantifying the weight of evidence in forensic speaker comparison.
  - Topic 3. Discussion about background and development data and reference populations.

*Presented by Reva Schwartz*