

**Embargo Tuesday 29 October 2002**  
**Spy vs Spy: the science of surveillance and security**  
**Session 4: 12.20pm Signature snoops and other scrutiny**



Presentation: Just not cricket  
Dr Philip Rose  
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The Science Forums

- *key words/terms: linguistics, phonetics, speech acoustics, evaluation of evidence*
- *applications: law enforcement, legal profession, linguists, phoneticians, speech scientists*

### **DNA can't talk**

How can the court be helped to decide if two recorded telephone calls were left by the same person or by two different people? How does a forensic speaker identification expert evaluate the strength of speech evidence? Can voice identification lead to convictions being made or sentences quashed?

DNA identification continues to make the news in a number of high profile legal cases.

But DNA can't talk.

It can't be recorded planning, carrying-out or even confessing to a crime.

And more and more criminals are being recorded. Perhaps this is why interest in Forensic Speaker Identification (FSI) is increasing.

### **Forensic speaker identification**

By contributing to both the conviction and elimination of suspects on the basis of their voice, forensic speaker identification can be very effective.

Yet there is there is very little understanding about:

- what forensic speaker identification involves
- the proper methods to use
- what it can achieve, and
- its limitations.

How does it work? Certainly not like in popular detective shows. Voice sample comparison can be complex, especially as recordings are often made in less than ideal circumstances.

Forensic speaker identification brings together acoustics, linguistics, phonetics, speech perception, statistics, probability theory and logic, and is of great relevance and interest to law enforcement officers, the legal profession, linguists, phoneticians, and speech scientists.

Successful voice identification depends not only on computer analysis but on the human ear comparing both linguistic and non-linguistic features.

Examples of linguistic features are whether you say *daahnce* or *dance*, *necklace* or *neckluss*, *okay* or *aikai*, or *might* for *mate*.

While non-linguistic features are: your overall pitch, whether you creak or not -- like Bob Hawke -- how nasal or breathy you are.

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### **Profile**

Dr Phil Rose is a forensic phonetic consultant, associate professor and head of the phonetics laboratory at the Australian National University in Canberra.

For almost 30 years, he has researched similarities and differences between individuals in their speech and has undertaken forensic speaker identification casework in Chinese and Australian English, for over a decade.

He holds a PhD from the University of Cambridge in Chinese phonetics and degrees in Linguistics, German, and Russian.

A member of the International Association for Forensic Phonetics, Dr Rose is a past member of the Forensic Standards Committee of the Australian Speech Science and Technology Association, and a Member of Council of the International Phonetics Association.

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