

SECRET STRAP1

a) Visit to R64, NSA

[REDACTED] and [REDACTED] from B14 visited our opposite numbers in R64 at NSA during the last week in November. The aim of the visit was threefold:

- i. to learn about the NSA process for building language ID (LID) and speaker ID (SID) systems whilst sharing our own experiences;
- ii. to establish closer collaboration on research tasks;
- iii. to move forward the exchange of datasets/models for use in LID and SID systems.

An opportunity for closer collaboration was identified for LID, and it is proposed that [REDACTED] will spend a 4-week TDY in R64 probably in March.

The sharing of models with NSA is possible, but the legal position there currently prevents them sending us raw datasets, although it is hoped that this may be overcome. We undertook to provide them with our Afghan languages LID corpus, which R64 have now received.

Hotzone is NSA's audio tool, which we evaluated some years ago and assessed to be unsuitable for use at GCHQ, due to its inherent latency and inability to accept plug-in filters. Since then this tool has undergone a complete software re-write, with impressive results. We have asked for a copy of the source code to evaluate this further with the initial intention of integrating it into the B14 Monte Vista operational prototype. Hotzone is coded in Java and will run natively on a Windows desktop, so potentially could be considered as an eventual replacement for Rosecross.

We were shown NSA's Voice RT (Voice in Real Time) system, which provides content-based information to NSA linguists/analysts used in conjunction with Nucleon and Hotzone (NSA's equivalent of B3M and Rosecross). Voice RT provides Speech Activity Detection (SAD), SID, LID, Speech to Text (STT) and Phonetic search. Essentially it is a one-stop shop for what we term Voice Content Related Information (CRI). This is a major element of the HLT Programme and a massive effort has been expended to improve deployability of this system.

b) CLEAR

On 31 Jan, B14 will be hosting a visit from the CLEAR (Centre for Law Enforcement Audio Research) consortium. CLEAR is a multi-agency endeavour sponsored primarily by us, SS, HMGCC, SOCA and the Home Office to become a centre of excellence in the science of speech cleaning and recovery. Four academics and a senior scientist from HMGCC will be visiting and wish to see the problems that we face at GCHQ with intelligibility/audibility of our voice intercept. OPI~MENA and OPI~SC have already been asked to demonstrate some of the problems they encounter, and other IPTs are welcome to contribute too. More about CLEAR here:

[REDACTED]