

# New Methods in Archaeology

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**Abstract:** *A field report on trials conducted with an innovative device for recovering ancient sounds and emotions from buried metallic objects. The site of a former synagogue was investigated and significant finds were made. Several finds are briefly described and interpreted.*

**Keywords:** *archaeology, archives, Australia, colloquium, conversation, devices, electronics, emotion, Florence, Holocaust, Jewish, MakroKomp, NSW, reconstruction, recording, sound, Strathfield, Sydney, synagogue, technology*

## Foreword:

The first season of the 2075 dig did not turn up anything unexpected. The foundations of the 1959 synagogue were unearthed precisely where the NSW State Archives indicated they would be and we were not surprised by the absence of Judaica amongst the artifacts. There were, of course, a few tarnished Elizabethan pennies and a single one-shilling piece, these most likely having fallen from a hole in a brickie's pocket, but similar finds have already turned up at numerous other sites. Evidence of mid-20th century construction techniques was found in the form of a cement-encrusted wheelbarrow missing one shaft. It had apparently been abandoned after the shaft rusted through where it joined the chassis.

Our plans for the 2076 season had been to dig a deep east-west trench through the southern quadrant, thereby cutting across the 1970s classroom complex on the upper level and the foundations of the 1880 mansion on the lower level. With luck, we hoped that the ruins of the former might turn up 1990s artifacts such as a CRT monitor or perhaps even a late 20<sup>th</sup> century hard disk. However, these plans were set aside as a result of the The Second International Colloquium on Electronic Archaeology<sup>1</sup>, to which we had both been invited.

At this point, it would be useful to clarify the state of our knowledge prior to the conference. The electronic technologies with which we were already familiar sprang from medical diagnostics and were not originally intended to

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<sup>1</sup> 8<sup>th</sup> – 11<sup>th</sup> July, 2075 in Tallinn, Estonia. See <http://eurocom/eArch2075/proceedings>

be applied to archaeology. They include X-Ray, Ultra Sound (US), Computed Tomography (CT), Electroencephalography (EEG), Electrocardiograms (ECG) and Magnetic Resonance Imaging (MRI). Early twenty-first century developments had enabled technicians to conduct all these tests remotely and by the end of the third decade they had been bundled into a single app which itself had been integrated into the textile of the body-envelopes that we all wear today. Subsequently, software was developed to interpret the emotional import of the physical data and this has led to so-called Gestalt, or 'body-and-soul', medicine. Needless to say, all this information is transmitted from node to node by geo-stationary satellites and can be intercepted by anyone possessing appropriate software.

Turning back now to the Colloquium on Electronic Archaeology, it was there that we first heard about a new technology, which upended our plans. It is a simple device that is capable of picking up faint electromagnetic traces from metallic objects. Although it is nothing more than the most recent development of the original 1940s military mine detector, it is far more sensitive. In fact it is so sensitive that it will react to any metallic object within a range of 100 meters. Thus it detects latent signals from such objects as plumbing pipes, electrical cabling and the steel reinforcements that are concealed within poured concrete columns, as well as from externals such as utility poles, gutters and various decorative fixtures.

The beta-version of this device was unveiled at the conference by the Chief Technological Officer of MakroKomp (D-Devices F-Data). The central message of his presentation was that for the first time in the history of archaeological research it would now be possible to gather up sounds and emotions from the past. Complete discussions were still beyond the device's capabilities, but snippets of dialogue, resonance, blood pressure readings from heated arguments and neural pulses from discrete thoughts were already accessible. In concluding, he announced that a number of units were available for field testing and invited experienced researchers to approach him later in order to register for the programme. We took up his invitation without hesitation, and are now pleased to present some of the raw data collected from a site at 19 Florence Street, Strathfield, NSW, AUSTRALIA. We also offer some tentative interpretations of these findings.

## **Field Report:**

Jarring musical tones, strident and plangent by turns, were picked up from the months of September and October throughout the last four decades of the twentieth century and well into the twenty-first. Subsequent investigation revealed these to be the sounds of a 'shofar', a trumpet-like musical instrument made from a hollowed-out sheep's horn and traditionally sounded on the Jewish festivals of Rosh HaShana and Yom Kippur. It was this finding which confirmed the site to be that of a former synagogue.

There were numerous snatches of speech beginning with the words "This week's reading ... " or "This week's parasha ... ". Although the voices differed over time, these were easily identified as the opening remarks of various ministers' weekly sermon. Few of the sermons survived in their entirety but we were able to glean some information about the community's true religious sensibilities by correlating the sermons with the listeners' simultaneous reactions. The most common of these was "How long will he go on?". Another high-frequency thought was "Why does he keep using words in Hebrew and Yiddish? It just turns me off." These English-language thoughts have been attributed to Australian-born congregants. On the other hand, there were also traces in German, Polish, Hungarian and other European languages. Although these have not yet been translated, it is assumed that they emanated from Holocaust survivors who, so it seems, were members of the community. Thus it is expected that they will reveal greater intellectual engagement with the words being spoken.

One particularly interesting find was two parallel blood pressure readings picked up by telephone cabling, some of which lay buried under rubble. The readouts came from the approximate location of the minister's office, which we were able to establish from the original architectural plans. What attracted our attention was that both sources escalated over a period of some five minutes, by the end of which one of them had actually reached 180 /110 mmHg – which we are told indicates a hypertensive crisis. These readings subsequently led us to a verbal exchange that simultaneously occurred on the same ground. Needless to say, we were unable to reconstruct the whole conversation, but the little that has survived is highly revealing. For

convenience sake, we have labelled the two speakers **A** and **B**. The conversation went as follows:

**A.** *What's it about this time?*

**B.** *My salary.*

**A.** *What about it?*

**B.** *I need a raise.*

**A.** *Why? We pay you well enough.*

**B.** *You pay me the same salary you paid my predecessor, both of whose children were no longer living under the same roof. I happen to have three small children – which you well know.*

**A.** *Be that as it may, you perform the same duties as your predecessor. And, I might add, not quite as conscientiously.*

**B.** *What's that supposed to mean?*

**A.** *Simply that there've been complaints.*

**B.** *I certainly haven't heard any.*

**A.** *You'd be the last to hear. Anyway, I'm not going into that. The point is, we can't afford to pay you any more than we're paying you now. Membership is down and donations are drying up.*

**B.** *In that case, I'm giving you my notice.*

**A.** *Today? A month before Rosh HaShana? You ... unintelligible ... contract!*

Unfortunately, we were unable to date this exchange. Nor have we been able to associate the speakers with the archived members' list.

Another short exchange went like this:

**A.** *I can't lead a synagogue like this.*

**B.** *Why not?*

**A.** *The men and women sit together.*

**B.** *No, they don't – they sit on opposite sides of the aisle.*

**A.** *That's not good enough.*

**B.** *Who says?*

**A.** *Rav Ahron Soloveichik has written that it is forbidden unless you erect a mechitza.*

*B. Yes, but Rav Chaim Dovid Regensburg approves seating without a partition. We would lose members if we were to install one.*

Archived accounting records from 2014, shortly before the synagogue's sale, mention income from the disposal of the synagogue's pews, from which we deduce that 'Speaker A' ultimately became the synagogue's minister.

We are still waiting for our rabbinical consultant to enlighten us on a particular theme that runs through the material like a refrain. It appears intermittently on Saturdays at about 9:15 am, and also on occasional weekdays – always at about 5 or 6 pm. It sounds something like “Hoshia Et Amecha, Uvarech Et Nachlatecha, Ur'em Vna'asem Ad Olam”, but the string is rarely recorded in its entirety. Sometimes it breaks off at “Vna'asem” or at “Ad”, in which case it is usually followed by “Let's wait another ten minutes.”. A variation on the same theme goes: “Not-one, Not-two, Not-three, ... ” and often stops at “Not-seven”. We are anxious to understand the significance of these puzzling utterances.

### **Conclusions:**

The findings listed above have already been communicated to MakroKomp and we understand that the company is now utilizing them to develop an improved version of the device. They have also intimated that a second device, an image reconstructor, is already in the works. It is innovations such as these which herald the future of twenty-first century archaeology and we are proud to be amongst its pioneers.

by Geoff Toister  
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