

ATH2011 – Setter's Notes

1. The Entries

Just a few post-marking notes to round things off.

The first thing to do is to thank you all for taking part and submitting entries. Knowing that the ATH was somewhat technical in nature and in theme, my biggest fear was that this would be a big turn-off, and that no-one would enter. One of the most pleasurable parts of the whole experience was watching the entries arrive in my inbox on 16th January.

Many thanks for all the kind words which you included in or with your entries – they really are appreciated. I believe that most of the sarcastic comments and criticisms that I have seen are light-hearted or intended to be constructive, but even if they're not then a certain amount of thick skin is a pre-requisite for an ATH setter.

Six teams gave me access to their wikis or forums during the Hunt, and I cannot thank them enough for this. It gave me a great insight into how things were going. Knowing these teams' records, I expected them all to do well, and it was fascinating, and gratifying, to see them progress at about the pace that I had hoped for.

Alcoholus Lubricatum was not one of these teams, and it was a complete surprise to me when they told me that they had found the treasure within four days. It was when I saw their solution that I discovered that they had broken the Enigma code without knowing all the settings. They were not the only team to do this.

Anyway, back to the teams that I was monitoring. This also gave me early warning of any problems, and led directly to my publication of a couple of clarifications during the ATH. The final thing to say is that it was really exciting to watch the race – a very close, suspenseful race spread out over a couple of weeks. Logging on to see how they were doing was addictive, as any of you will know if you were monitoring my logons. So, once again, thank you!

The entries ranged from the beautifully presented to the... well, undecipherable would be too strong a word. I was amazed at how clearly – and in many cases, concisely - some of you were able to present such a lot of complex information. (As you'll have realised by now, I have the opposite problem!) There was very clever use of graphics, with entries including maps, annotated copies of the ATH pages, diagrams of the treasure chest positions, and much more. In common with previous setters, I found that the easiest thing to do was to print them all and literally mark them by hand.

2. How you solved it

Obvious it may be, but the principal lesson that I learned was that people don't solve an ATH in the way in which you expect.

If you read the solution, you'll have realised that when I created it one of my earliest thoughts was the use of "lost treasures", and of having to rearrange the pages into chronological order of the treasures being lost. Other sequences which ran over several pages would then fall into place.

But in many – most? – cases, the treasure ordering was not the one that you found first. Many teams solved the Smithy code first – quite a few you then referred to the "correct" page order as "Smithy code order".

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Several teams broke the ADFGX code without (or before) working out that BMAJOR was the key for it. Quite permissible, of course, and completely within the spirit of the ATH in general and this one in particular. But I'd thought that it would be obvious that BMAJOR was a key for something.

A few folk worked through the Turing Machine program manually, before finding the URL for the particular TM sim that the program was for. No problem with that, but it's not what I had intended.

At least two teams broke the Enigma code without knowing all the settings. As Alcoholus Lubricatum said, not what the setter had intended, but very much in the spirit of Bletchley Park. I kicked myself very hard when I read their description of breaking the code. One of the good cryptographic practices of the Germans in WW2 was to limit messages encrypted under one key to around 200 or 250 characters. Longer messages were split into segments of this length, with each segment being encrypted using a different key. You can find examples of this on Dirk Rijmenants' website, or elsewhere online. The detailed instructions were 860 characters in length, but for the sake of simplicity, I ignored good practice, and encrypted the entire message under one key. This made it significantly easier to break. I've worked in information security (but not cryptography) for a long time now, and I know that good practices are there for a reason – so to say that I am embarrassed by this is putting it mildly. Still, it brings a whiff of realism to the Hunt.

Returning to the point about you not solving the ATH in the anticipated order, a number of you found it disappointing when you solved the TM or Enigma URL puzzles, or the diagonal message from the answers to the questions, to find that they didn't add to what you already knew.

3. Things that could have been improved

As for the general nature of the Hunt, I knew when I was creating it that it was rather code-heavy. I often wondered if this was partly my subconscious obtaining revenge for all those times when I have been utterly stumped by codes. I also worried that this would be a turn-off. I think that the extensive use of codes and ciphers was justified for this particular ATH, but I also agree very much with the Hunter who suggested that I had taken this aspect of the ATH about as far as it could go, and that future ATHs should put the emphasis elsewhere.

You'll have seen from the solution that the "Alan Turing's Silver Bars" string derived from the top-of-page logos wasn't quite right. Well, actually, it did work out if you knew what I meant – and quite a few of you did – but I realised that the late substitution of silver bars for a picture of Shenley Wood had introduced a factor – more letters – that I hadn't thought about. I marked that generously.

In the "fish streets", the inclusion of two roads on one page clearly caused some confusion. Three teams did realise that this referred to a fish with a two-word name – the Indus baril – and this was a relief to me. Many of you wondered what to do with "barhill", and it didn't help at all that the station of that name features in the Dorothy L Sayers novel "Five Red Herrings", which appeared in the ATH a couple of years ago. As with many other aspects of this ATH, this was pure unintentional coincidence.

In fact, you found lots of things in the puzzle – cross-references, connections, background information – that I had not intended. One of my fears when creating it was not including enough material. Working on my own, I could never hope to include, for example, the amount of content that was in the Dorothy L Sayers ATH a couple of years ago. One of my worries when watching the six teams' progress was that they were often looking for stuff that simply wasn't there. For example, looking for links between the wordsearch grid on the first page and other parts of the puzzle.

Of course, I've done that myself in past ATHs, but, even so, it was a concern. Never was a team name more appropriate than "Apopheniacs Anonymous"!

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4. The Questions

What about the questions? 78 of them – 3 (rotors) times 26 (letters) – coincidence! (78 words in the introductory text in the centre of page 1 – also coincidence!)

A number of the questions were answered by everyone. To save you checking, the answers were:

- Tony Burrows (fronted three groups on one TOTP)
- St Albans (the War of the Roses question)
- Chappe (Claude, the semaphore man)
- Pooh Sticks (9yo world champion Saffron Sollitt)
- Elizabeth Taylor (late for her own funeral)
- Portuguese Water Dog, or Bo
- Sean Bean
- Salem (Witch Hunt).

I was mildly surprised to see one or two of those above, but well done anyway!

Sean Bean has featured in the past few ATHs, but whether we now have a firm tradition of an annual Sean Bean question is one that I shall leave to future setters. The same goes for a Roy of the Rovers question.

The hardest question was “**On Mr T’s 59th, what uplifting emotion did AFC Wimbledon fans experience, slightly ahead of schedule?**”, with the answer “**rapture**”. Only three teams answered this correctly. It was easy to work out that the date was 21st May 2011, when AFC Wimbledon won promotion to the Football League. I didn’t know that they had had the goal of achieving this within 10 years of their formation, and that they achieved it a year early - which, confusingly, was “slightly ahead of schedule”. But “promotion” is not an uplifting emotion. I was strict about this – 21st May was also the predicted date of “the Rapture”, a literally **uplifting** experience, so I didn’t accept the answer “euphoria”, which at least supplied the correct letter for the diagonal message.

Only five teams told me that **Queen Victoria** was the 19 year old who “**stuck by her pals when the Bobby caused a crisis in the bedroom**”. I must admit that I did think long and hard whether to include this question, knowing that it was a bit vague, and that it gave no hint as to when the event happened. But an ATH has to have its stinker questions – so in it went.

Six teams worked out one of my favourite bits of trivia – that Gil Scott-**Heron**’s father played for Celtic. I never want to hear of New Zealand’s stitchbird again ☺

Fourth most difficult question was about the inclusion of **Molly Bloom**’s soliloquy on Kate Bush’s album of reworked songs from earlier in 2011. I didn’t think this would be difficult, but then again I’m an old fart, and maybe people who are younger than me associate *Wuthering Heights* with Emily Brontë, as it should be.

Only a couple of you told me that Ross County was the most northerly Scottish football league club, which was pleasing. I hadn’t realised until one of you mentioned it that Ross County’s own website makes this erroneous claim. If I can find the strength, I’ll write to them,

The answer that I was expecting for the question on “**first living person outside the Royal Family to appear on a UK postage stamp**” was **Roger Taylor**. Quite a number of people mentioned the earlier stamp commemorating Francis Chichester’s solo round-the-world voyage. If I had been setting the question now, then **Francis Chichester** would be the answer, and Roger Taylor would be incorrect. But Taylor gave you the letter for the message from the answers, so I accepted both. It was pure coincidence that two answers close together had the keyword

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“Taylor”. I don’t think I noticed this until after the ATH had gone live. This caused a little confusion, with some of you wondering whether you needed to use their forenames to distinguish from each other.

Which F1 driver - after 1959 - came 6th, yet retired without a point? A lesson for setters to research their questions very thoroughly. First of all, I had to publish the clarification that the question referred only to F1 World Championship races, since I had forgotten that there were F1 races which were not part of the World Championship.

A number of teams found Gerhard Berger, and one or two found Guy Ligier, whose surnames, perhaps unfortunately, gave you the correct letter for the message. One of them (Berger? I’m not going to look it up again) was 6th in a Grand Prix, yet received no points because he was more than a lap behind – which some said was the same as “retired”. The other was 6th once, but received no points because he was driving an unregistered car, or something like that.

But neither of these “retired” from the race, or retired immediately afterwards from racing. Berger amassed 385 F1 World Championship points, and Ligier (thank heaven!) acquired one, so neither fitted the criterion of retiring without a point.

Mercifully, 11 of you found the late Lella Lombardi, who ended her career with the sum total of 0.5 of a point.

The one about your **blood being T-** gave me a few anxious moments. Early on, one of the teams that I was monitoring had the answer of “albino blood python” for this. So I investigated, and because I’m not so hot on the wet sciences, I shall quote from Wikipedia:

“Tyrosinase is a copper-containing enzyme present in plant and animal tissues that catalyzes the production of melanin and other pigments from tyrosine by oxidation, as in the blackening of a peeled or sliced potato exposed to air. It is found inside melanosomes. In humans, the tyrosinase enzyme is encoded by the TYR gene. A mutation in the tyrosinase gene resulting in impaired tyrosinase production leads to type I oculocutaneous albinism, a hereditary disorder that affects one in every 17,000 people.”

OK, so the T refers to the enzyme *tyrosinase*, and being T- effectively means that the affected creature has albinism. So it’s not just blood pythons which are affected. And it’s not your blood that’s T negative - it’s a mutation in the gene, which is carried in cells called melanosomes. Maybe these are in the blood – maybe not. (I told you I wasn’t hot on the wet sciences!) But it’s not specifically a blood condition or blood type. So in the end I accepted **Vulcan**, but nothing to do with albinism.

The one question which I thought was too easy – “**What type of plant is on average 7 feet tall, has a long whip-like sting, and uses its roots for locomotion?**” – provided me with the answer which most astonished me. The Margaritas told me that it was the “walking palm”, which I’d never heard of. Look it up - http://en.wikipedia.org/wiki/Socratea_exorrhiza or just google for “walking palm”. This bizarre tree has stilt roots, and there was a theory – now probably discredited – that it could use these to regrow in a new position if it was knocked down by another tree, essentially “walking” across the forest floor. The Wikipedia article has a diagram illustrating this.

Granted, the walking palm is much taller than 7 feet, and it doesn’t have a whip-like sting, but a bizarre “walking” plant is exactly the sort of absorbing trivia that the ATH questions are all about – so the Margaritas received bonus points for this.

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The other thing that they received bonus points for was for telling me that the Clock Tower in St Albans used to have a shutter telegraph on top of it. I've lived in St Albans since 1984, and I never knew that.



St Albans High Street in 1807, showing the shutter telegraph on top of the city's Clock Tower.

5. Scoring

I wasn't generous with bonus points. Lots of you came up with interesting but incorrect answers, or found links or coincidences which I had been unaware of these. But none of these really leapt out at me as startling or important new information, and in any case I was not going to allow bonus points to determine the results of the Hunt.

So the only other bonus points that I awarded were to the teams who found the treasure at night. I doubled the points that they received for finding the treasure.

Publishing the solution and the proposed scoring scheme before doing the marking was, of course, asking for trouble, and so it proved.

When I started doing the marking I had only looked at a few submissions when it dawned on me that DIA2 – saying that Cantor, Gödel and Turing were associated with the diagonal argument - was basically a point for saying the same thing as DIA9 and especially DIA10. In particular, was I expecting entries to say the same thing twice – once for DIA2, and again for DIA9 and DIA10? Or, to look at it the other way round, if an entry only said it once, as many did, should the team lose out? I quickly concluded that this was my error, and decided to remove DIA2 from the marking.

DIA6 and DIA7 - about "Grok diagonal turn?..." - would have awarded points for simply paraphrasing what the sentences said. So I took them out of the marking too. There were still points for the anagram, though.

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The Setter's guide at <http://public.logica.com/~ath/setting/setmarking.html> on the ATH website says: "It is up to the Setter whether they issue the Solution after submissions are received, or wait to publish it along with the results. The latter approach reduces the risk of any gaffes being left in your Solution that might be brought to light by marking the entries."

I chose the former approach because I thought it would take a while for me to do the marking. Future setters will have to make this difficult choice.

So I think that's about everything. All I have to do now is obtain the prizes and hand them out, and wake up on February 29th with a hangover and a lot of free time on my hands! I wonder what I used to do before I started this...?

Once more, thank you all for taking part, and, whether you do this only once a year or more often, odhu ntinggo!
