Chelmsford Amateur Radio Society
Newsletter

August Meeting
Tue 3-Aug-2021, 7:30pm
Online by Zoom

Two Short Talks
By Murray G6JYB & Paul G4PVM

For August we have Two Short Talks:-

- **Spectrum Matters** - by Murray Niman G6JYB
  - and yes it does matter...

- **IARU HF Championship** - by Paul Tittensor G4PVM
  - as well as other CARS Anniversary and activities

These two short talks by CARS members Murray & Paul will illustrate where your wavelengths come from, down thru to your licence and then onto activities on the air, inc some forthcoming notable events.

So do join us as we cover a lot of ground in just one evening!

Zoom:

Quick Link**:** https://us02web.zoom.us/j/88457971883?pwd=aktaNTVEQ2pGNGwzTDZEZkJxRkhLZz09

- Meeting ID: 884 5797 1883
- Passcode: 285647

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Club Diary

Tue 3-Aug-2021	Two Short Talks – Murray G6JYB + Paul G4PVM	Online by Zoom
Tue 31-Aug-2021	Top Band Net – as it's the 5th Tuesday in a month	On Air – see below
Tue 7-Sep-2021	tbc – Club mtg	
Tue 5-Oct-2021	CARS AGM	

Club Nets

CARS meets for talks/events on the first Tuesday of the month. The subsequent Tuesdays have club radio nets as follows below and dates listed on our calendar at www.g0mwt.org.uk/main/events/categories/net/ :-

- **2nd Tuesday in the Month – VHF**
  The CARS VHF FM Net uses GB3DA from Danbury starting at 8pm (local).
  GB3DA is 145.125MHz Input and 145.725MHz Output - and CTCSS-only (110.9Hz), 2min timeout
  If for any reason GB3DA is not available then 145.375 Simplex will be used. Vertical aerials are best for this

- **3rd Tuesday in the Month - UHF**
  The CARS UHF FM Net uses GB3ER from Danbury and starting at 8pm (local).
  GB3ER is 434.675MHz Input and 433.075MHz Output - and is CTCSS-only
  Vertical aerials are best.

- **4th Tuesday in the Month - HF**
  The CARS 80m Net on "3756kHz" Night, SSB and starting at 8pm (local).
  Horizontal aerials are best. The idea is to enable distant CARS Members to join the Net.

- **5th Tuesday in the Month (when there is one!) - MF**
  This is the CARS Top Band Net on 1947/1950 kHz +/-QRM, LSB and starting at 8pm (local).
  Horizontal aerials are usually used for this Net. A reminder - limit your power to a max of 30 Watts, please.

Training & Morse Classes

If you are interested in the new RSGB online exam or other opportunities,
please contact **John O'Connell M0JOC** our training coordinator and Exam Secretary

John can be contacted via training2021@g0mwt.org.uk or 07868-004380

Full Licence Course – The next Bath Distance Learning Course is starting, led by Steve Hartley G0FUW and may soon be fully subscribed. If you fancy going for the top level – get in touch asap - they have a great record

Expected soon - RSGB expects to update the exam syllabus for the recent Ofcom EMF changes

More info and other updates are at: www.g0mwt.org.uk/training

Morse classes at Danbury are suspended – but do contact Andy G0IBN who has on-air practice sessions and via Skype too… https://join.skype.com/clsfKXKmINvf

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July Meeting: Taking Toy Computers Seriously

Damian Bevan G4WPO who gave us the fascinating Alan Turing talk last year returned to talk about 'Taking Toy Computers Seriously'.

Back in the 1980s many may recall we started with Sinclair et al which led to the BBC Micro which were 'toys' but very educational. Coding and understanding is now back in education fashion.

The teaching of Computer Science is vitally important and the current generation of school students are being taught 'coding'. As modern computers are far more complex, the core concepts can be more easily taught with simplified models that can either be emulators of old ones, or new models that include Microbits, Arduinos and Raspberry Pi's.

Back in the 1930s before electronics, computers were the people who operated mechanical tabulators. Katherine Johnson was one such, made famous for here pioneering work for Nasa in the film 'Hidden Figures'. Pioneering names include: Charles Babbage, Ada Lovelace, and later Alan Turing.

Computing Pioneers: Charles Babbage, Ada Lovelace and Alan Turing

The original drivers included star, planet and tide tables for navigation, company accounts and pensions annuity tables. WW2 then pushed this to solve German codes.

After the war Turing came up with the concept of a general purpose programmable machine.

In practice the most popular practical architecture was by Von Neumann who developed a scheme in 1945 based on Control & Arithmetic units, memory storage and Inpu/Output.

Two emulations of such basic concepts that you can find on the internet are the Little Man Computer (LMC) and ARM-Lite assembly language emulator intended for A-Level syllabus.

Computer Languages disguise low level machine code and assembler, to enable easier higher-level coding. In education popular ones are now :-

- Scratch (by MIT) for kids education – which is quite graphical
- Python - also used in education, but is now widely used for serious applications
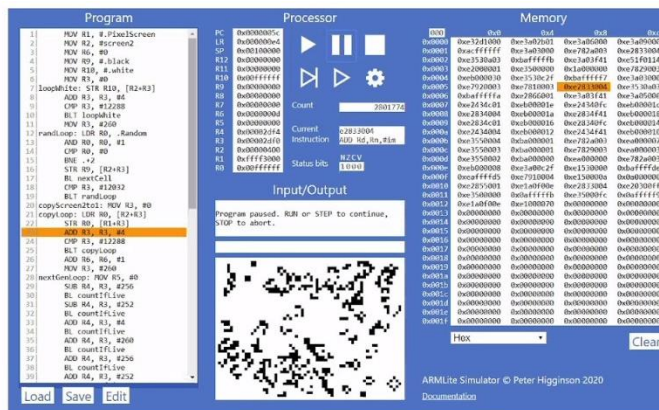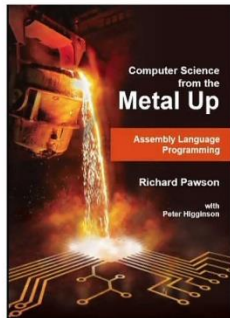
A useful learning resource for the latter is www.Pythontutor.com .

Other handy tools that Damian highlighted included CompilerExplorer on www.Godbolt.org (mainly for C++) and www.replit.com for lots of other languages. These web based tools save having to install them for simple dabbling. A more entertaining example was Pico-8 for classic style game writing/sharing.

Finally Damian covered tow of the most popular hardware – the BBC Micro-bit and Raspberry Pi.
The former is more of a simple microcontroller, whereas the Pi has now matured to have plenty of memory ports and graphics to be fully Linux capable.
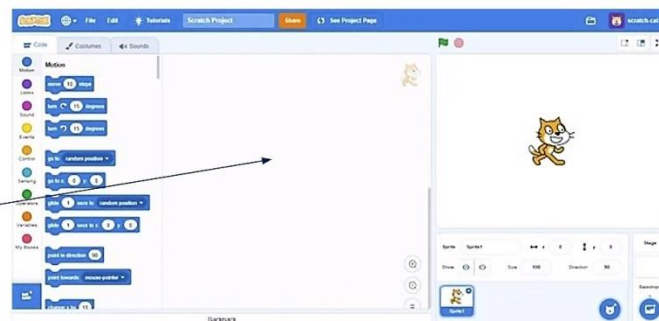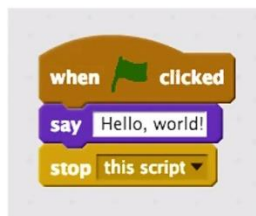
Summarising, toy computers are valuable for 'learning through playing'. However some have real 'grown-up' coding languages and uses. Indeed, many millions of Pi's are now sold every year – a real success

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ARMlite toy

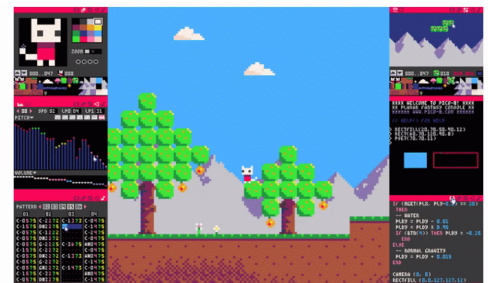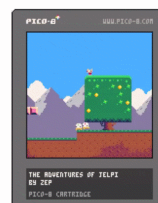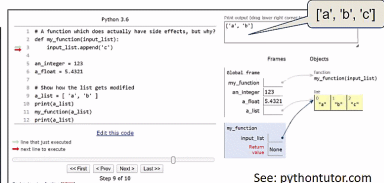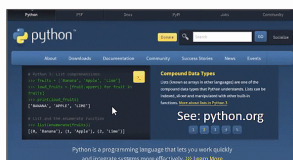**Online Emulation of an ARM processor for the Game of Life**

Scratch toy

Scratch – see more at https://scratch.mit.edu/

Online Python & pythontutor

PICO-8 toy

Online Python Tutor and Pico-8 Gaming

Amazing capability art a bargain price point – BBC Micro-bit and a Raspberry Pi-4

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Free Ink Cartridges !

FREE to a good Home - From G8DET:-

Unfortunately a mains surge in Springfield, Chelmsford did my lovely Canon Pixma iP 4850 printers in. They are no longer made so I bought a pair of Canon TS705s and guess what? They use different ink jet cartridges!

Things were running so well before the surge, I had just restocked with my favourite cartridges – made by Jettec in, I think, Switzerland. They run on Canon Pixma iP 4850 & 4950, iX6550, MG5150 5250, 5350, 6150, 6250, 8150, 8250. Also MX 715, 885 & 895 to mention a few.

They are coded Canon PGI-525 & CLI-526. In packs of black, yellow, magenta & cyan.

I have also acuminated a number of similar but older ink jet cartridges – try me?

I will now never use them and I want to declutter my office.

Contact John Bowen G8DET via   g8det@g0mwt.org.uk

Free Hi-Fi Speakers !

After a long overdue visit to his loft, Colin has an unwanted pair of Mezzo SL loudspeakers. Before they go to the dump, unlikely he knows, but if by pure chance someone is interested in having them, would they email him on colinpage10@btinternet.com please, they are free!

GB3ER Upgrade/Change

Following the upgrade of GB3DA in Dec-2019, a similar Yaesu Fusion repeater was installed for GB3ER on 7-Jul-2021. Unlike GB3DA, this time GB3ER has been set to use Automatic Mode Selection (AMS). So whilst FM inputs continue to give FM outputs, any Digital-C4FM inputs will give Digital Outputs. Analogue users are thus reminded that 110.9Hz Tone Squelch must be set on their receivers for them to ignore digital outputs. Also - Do not over deviate - as NBFM is in use.

Such investment would not be possible without members support and subs - which will be appreciated to cover the cost of a future internet link on site.

RSGB Convention goes online for 2021

Despite hoping to meet face-to-face again this year, the RSGB Convention in October will again be online. This major indoor event takes many months to plan and, due to continuing COVID-19 uncertainty, the Society has to make the safety of attendees, volunteers and staff a priority.

Look out for more details in RadCom, GB2RS and online in the coming weeks.

Provisional Date: Saturday 7th October

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