STARLITE

The Newsletter for Members and Friends of

G6OI

1938

Stourbridge and District Amateur Radio Society

G6SRS

1938

incorporating

Old Swinford Hospital School Radio Club

G4CVK

1969

ISSUE 02/2012

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STARLITE

MEETINGS

Visitors always welcome

The Society holds its full meetings on the

1st and 3rd Monday of each Month at

Old Swinford Hospital School
Heath Lane
Stourbridge
(8.00pm – 10.00pm)

Additionally the shack is open during the same times on the intermediate Mondays

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STARS Web Site URL :-

www.g6oi.org.uk

WAP enabled

www.g6oi.org.uk/wap/index.wml

EDITORIAL

Dear Readers,

Foundation Course under way and club activity has been suspended to some extent so that we can help new entrants into amateur radio.

There was a lot of feedback from the crossword and Robert Vickers was the first correct entry, despite the crossword being impossible and one of the clues missing! The answer to 21 across was TESCO and the clue should have been along the lines of “Tessa Cohen's dad's shop?”. There was a conflict between 5 down and 23 across which Robert Vickers spotted and John Scott pointed out that I spelled Bonney – Billy the kid's surname - incorrectly as Bonnie.

Wayne Mocroft has kindly contributed a second part to his previous article on geocaching, which I hope you will find interesting. Thanks also go to Malcolm for his regular roving reporter article and photographs. Malcolm’s article gives an interesting look back of the events for our club during 2011.

My article has a very tentative link to radio which I hope will be of interest. It was interesting although time consuming for me to research and write. Let's hope it will be more accurate than the crossword!

As always I would be interested to receive contributions and feedback on any of the articles. I aim to make Starlite available for the first day of each month, so please can you submit any articles in time for this deadline.

Regards

Adrian Bryan (G0NLA)

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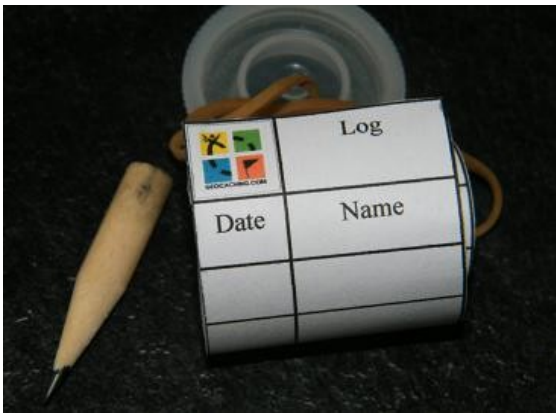
GEOCACHING GOT THE BUG PART 2

As I said in the previous article, I am off on my yearly journey to OE/ prefix country and I will be taking a "geocache" with me to hide in the hidden valleys in the Alps of Austria. The cache I will be taking will be a micro cache and is shown in the picture below. Most of you, except the younger members will recognise the container that has been used as a 35mm film canister, trying to find one of these is as rare as the proverbial rocking horse manure, but a gent named Keith Dixon came to my rescue and said he had one so there we are, sorted.

The next thing to consider was, as I cannot survey the area until I get there, I will have to cover every possible method of concealing this cache, so it may be hidden in a niche in a wall behind a stone or it may be stuck underneath something so it is magnetic. See the picture below

The magnet was very strong and removed from a cardboard box with a hinged lid that was held by these magnets. They are very thin and round about the size of a penny, there is a stack of 4 of these held in epoxy resin in the bottom of the container. This means the container can be stuck to a metal surface underneath something hidden from view. But I don't know what I am going to find until I get there. Inside the cache there is only room for a log book scroll and in this instance a small pencil but how long the pencil will last is unknown and really only meant as a joke. The log only has room for a date and name.



The rule when hiding a cache, is that it has to be with permission of the land or building owner, so I will be seeking permission of Christoph Sturm, the owner of Sturm Skischule and my 4pm watering hole to locate a suitable place for this micro cache. It has to be somewhere, accessible at all times, and all weathers so it can be found summer and winter. I have called the cache 123BOBO. This is significant to the place, as the Bar mentioned above is the BOBO Bar and bobo is one of the characters used for the children's ski school to entertain them during the day. My entertainment is usually "ein großes Bier mit

Williams Schnaps" from the BOBO bar. But that is another matter, by the way, BOBO is the large penguin like person in the picture below.

The reason for calling it 123BOBO is this is the catch phrase they use with the kids. The idea is, people coming to find the cache, will also have a drink and buy from his shop as well. I have downloaded and printed the German translation of the information sheet about geocaching so he can see what it is all about. The other reason for using this location is if the cache needs a new log book or it goes missing then I can call Christoph and ask him to replace it or find it as I will only be able to get there once a year. On the other hand " oh dear, I have to pop over to Austria, love, to see what's happened to my geocache, won't be too long" somehow I don't think I will get away with that one.

Once I have found my secure location I will have to get a grid reference from my GPS of its exact location and then log its existence on the geocaching.com website. This is where others will look to find any caches in the area they are visiting.

I will continue this in my next article and let you know how I get on.

While I am away I will be taking my Kenwood HT with me for a bit of \skimobile operation, this will be from the top of the mountain using the call sign OE\M5LLT\m through the echolink system. Connecting the Salzburg repeater with GB3KD and working from mountain top in Lofer to UK, so if anyone fancies a chat I shall be on during the day when I can, also some evenings using my netbook and echolink but that may be only when not otherwise occupied.

So till the next time M5LLT on the piste.

WINDOWS XP TOWER PCs FOR SALE

Second user PC's various specs all Windows XP ready to go. Towers only

£40 all enquiries to :-

M5LLT

ANDROIOD SMARTPHONES
A Brief Overview

Introduction

The mobile phone has seen a major change over recent years and Apple has had a major influence in this change. The introduction of the Apple iPhone put Apple two or maybe three steps in front of the nearest competition. A large part of the mobile phone market saw the mobile phone change from being primarily a mobile phone and more of a tablet computer. Apple and Blackberry have been major market leaders but Android phones have also joined the competition. Note however that a large part of the mobile phone market are happy with just that – a mobile phone with a battery that lasts up to a week and is simple to operate and does not see itself as a pocket computer. As an aside, it is interesting to note that smartphone complexity is increasing, but battery capacities are not keeping pace with this development.

An important distinction between smartphones is that Android smartphones utilise a large amount of open unlicensed software whereas. Apple and Blackberry use software which is subject to more copyright which you copy at your own risk!

It is easy to overlook the complexity of today's (2012) smartphones. A brief list of the of input/output devices supported by smartphones is revealing. Supported devices are:- forward and backward facing cameras, large LCD display, NAND RAM, DDR RAM, SD storage, speech encoders/decoders, microphone, speakers, SIM card reader/writer, individual RF power amplifiers for each of the four frequencies on which the phone can operate, antenna switching unit, bluetooth input/output, external

Above is a typical Android Smartphone

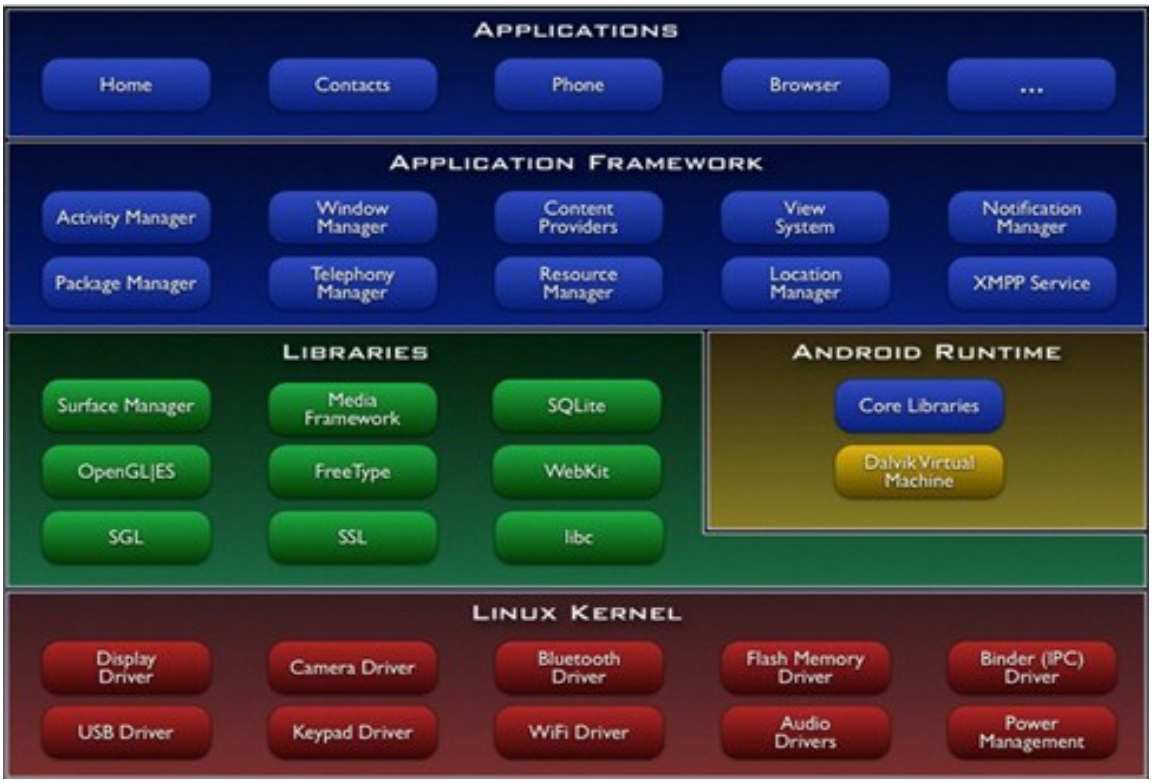
buttons, switches, LEDs, accelerometer, GPS unit and last but not least a computer central processing unit(s) and complex power supply arrangements for the above components. It is not

surprising that a computer has been incorporated to help to control the above environment.

This article will concentrate on the Android operating system which helps to run an Android smartphone

Operating System Architecture

In outline, an Android phone is run on a microprocessor that is optimised to run applications that are written in the Java programming language. Contrast this with applications that run on a PC where applications are often compiled such that they run in the microprocessors own instruction set.
The Android operating system has a layered architecture. One of the layered architecture objectives is to allow one layer to communicate and interact with the layers above and below in a formal way. The layers also mean that for application developers, large parts of the Android operating system are out of reach. The layered architecture also means for example, if the computer make and model used in the phones construction is changed, this should be transparent to the way the application runs. An often quoted objective is that Java application software should be 'Write once, run anywhere'. Note also that apps and applications are used interchangeably and both refer to the same thing.



The Linux Kernel

The lowest layer of software stack is a Linux Kernel (above in red). This is the program that interacts with peripheral devices mentioned above under 'introduction'. The Linux kernel in terms of a computer, is an operating system. Note Linux is pronounced Lynn, as in Redgrave with 'hooks' on the end but with the 'H' dropped. An operating system is a basic set of programs that run a computer. A computer in the case of android will probably be located inside a mobile phone or a tablet computer. The microprocessor or central processing unit in a computer can be sourced from different manufacturers such as Intel, ARM, Motorola, etc. Microprocessors are often optimised for specific environments which vary from devices embedded into video recorders to large corporate computer

systems. Important criteria for a mobile phone microprocessor will be power consumption and physical size but with processing power a desirable. Another important function of an open operating system such as the Linux operating system, is to present a similar environment for the applications it runs. It achieves this goal by providing a similar application programming interface irrespective of what make of microprocessor is used and it does this by hiding the underlying differences in microprocessor from the applications that are running.

Android components call on the operating system to perform varied requests such as get an item of information from a storage device and the returned result will be the same even though the underlying hardware is different. The component of the operating system that does this is called the HAL or Hardware Abstraction Layer.

A very large part of the operating system is written in a programming language called C pronounced "sea". C is a compiled language. The process of compiling a program turns a program into the computer's own low level instructions which the microprocessor can execute unchanged. C programs are efficient in terms of execution speed, but have a longer development time and are expensive in terms of programmer effort.

The Libraries

The next part to consider in the previous diagram are the libraries which are classed as middleware. Middleware sits in the layer between the kernel and the applications. The libraries are called on by the applications and handle such elementary functions as the graphics used to display information and the fonts used for text. Coder/decoders (codecs) are handled by the libraries and deal with handling the decoding of for example mp3 files to display videos. Data storage is handled by SQLite. In simplified terms, SQLite provides an efficient way of storing and retrieving computer data and is non-proprietary. Library routines are written in C and C++ (pronounced sea plus plus) . The above description of libraries has been kept deliberately short and is, like the kernels software, efficient in terms of the computer's resources.

The Application Framework

Leaving aside the Android runtime manager for the time being, the next layer we will consider is the Application Framework. All items in the Application Framework are written in the Java programming language and handle tasks such as starting and stopping of applications and the removal and installing of applications. Handling of buttons and layout of lists for example is handled by the application framework. Applications may communicate with each other when required. Note that Android is developed by Google which is part of the Open Handset Alliance.

The Applications and Dalvik Virtual Machine

In the Android operating system the abstraction process is taken yet another stage further. This is done by using a programming language called Java. Java applications or apps run on the Dalvik virtual machine in their own constrained environment. The applications are heavily optimised to reduce the computer internal memory usage and the optimised apps are condensed into a very compact language called bytecode. Consequently all interaction with the computer on which it is running is constrained, because all requests must pass via the Dalvik virtual machine. Each application runs in its own virtual environment which provides all the resources that the application needs to run. Since the applications are run in bytecode and are not executed in the microprocessors own language there is less scope and opportunity for viruses than on other operating systems such as

Microsoft Windows.

Conclusions

So let us recap. The Java application is translated into a compact form called bytecode. The bytecode implementation of the application executes under the control of an instance of the Dalvik virtual machine which in turn interacts with application framework. The application framework may call upon the library routines which may interact with the Linux kernel. The deliberate compartmentalisation of effort between the various components of the Android environment means that the resources can be shared between the application without inadvertently interfering with other applications.

The opening up of the Android operating system to a host of application developers means that end users can benefit from a wide range of applications that would often not be economic for commercial application developers to otherwise provide. Apps or applications are often free or sometimes there is a small charge. The open nature of the Android has acted as a stimulus for innovation in the use of mobile phones and lowered the cost of applications.

Disclaimer

Note that this article is based on my own armchair research into Android and may contain inaccuracies and generalisations. I am not in any way connected to Android product.

Adrian Bryan (G0NLA)

As usual any errors in this article are mine.

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FROM OUR ROVING REPORTER

January 2012 Stourbridge & District Amateur Radio Society

Welcome to my first report of 2012. Looking back over 2011, as far as STARS was concerned it was not such a bad year, although one of our long standing members Doug Robbins G4FYQ decided to retire from the society. We wish him all the best for the future. Doug like myself and some of the other members are getting on in years, and the time will shortly come when we will be doing the same. I am the third eldest member, Eric Brigstock, Alan Parkes and myself [61yrs]. There were a variety of interesting talks during 2011, a visit to the Fire station, the SSB Field Day and not forgetting the BBQ in the wet weather. Having an Editor for Starlite has enabled me to start writing my reports, which I enjoy doing. I start writing when I am either on a train, or a bus. I am drafting this article while en route to my first trade exhibition of 2012 at NEC 24th Jan. I mentioned about Billy Wells becoming a silent key, and I noticed in the Dec 2011 Rad Com that Billy would have completed 60yr RSGB membership in Dec.2011.

On Sat 14th Jan I was listening to the start of a contest on 80m, and one fellow in particular amazed me at the rapid way he was getting contacts. Within an hour he had a lot of contacts, it was rapid fire communication. I was presented with an engraved plaque which was a surprise to me at the 20th anniversary (which I started) of The Stourbridge Branch of The George Formby Society Dec 2011. On the Sunday 8th January I was interviewed on The Bridge Radio about my campaign to have Dudley Hippodrome turned into a theatre once more, along with a colleague from Halesowen. We are getting a lot of support with signatures and ideas to present to the Borough Council. The 8th of Jan was also the 100th organ concert by Paul Carr at Wordsley Church. So it was interview first and Organ concert in the same afternoon.

On Monday 23thd January our son Andrew decided to take Glenys and myself to Worcester and use the Park & Ride which for us, on this side of the city, is at Perdiswell which is not far from the leisure centre where the Worcester Radio Rallies were last held. So that brought back a few memories, the very last radio rally was held at the Worcester Rugby Club about 9yrs ago. Park & Ride is a good way of getting into the city and cheaper.

There were some more radio memories on Friday 27. I was booked to play for an office party at the Abbey Hotel Great Malvern. Having to entertain before the start of the meal 7-8pm, I decided to go by train from Stourbridge Junction and change at Droitwich. That brought to mind a memory of another venue where the Worcester Rally was held at the High School. Eddie Cotton G3PQZ assisted in the organisation. Glenys and myself once visited Eddie, who like me, is interested in both electronic and theatre organs. Eddie had a wine shop in Droitwich. In the living quarters over the shop he had a large Conn electronic organ. I asked how he got it into the room. The answer, was by taking a window frame out and using a fork lift truck. The lengths we go to with our hobbies!

After a 20 min wait at Droitwich, I was on my way to Great Malvern. Not too far away from there was where the early Worcester Radio Rallies were held at a school near Upton-on-Severn and because it was near to a strawberry field, the visitors to the rally would take a break and go picking strawberries. It became known as the Strawberry Rally. Even when they moved to Droitwich a coach was laid on to take people to a near by strawberry field. Just a few memories, times past when there were local radio rallies to attend ??? Will they ever return ? I did, after my evening out, back at Stourbridge Junction at 10.22. There are new trains on the line now. The previous one's had given 25 years service. The latest are more modern. Just one final item it's now official, and in The Shropshire Star, Thursday 26th Jan , that the Buttermarket at Shrewsbury has been sold. At this stage, the Shropshire Theatre Organ Trust [STOT] do not know if the organ concerts can continue. Either way,

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I may be spending time in Shrewsbury doing some work on the organ. I hope it remains there. To take the organ out would be a major problem. It's not been used since September 2010.

Best 73s Your Roving Reporter Malcolm Palmer G8BOP

I hope to fix up a talk about Life Boats and just a thought - If Dudley Hippodrome should re-open I may get in contact with G2DQU to re-open [I did say may]. Watch this space next month to find who he is.

Plaque presented to me by the Stourbridge Branch of the George Formby Society

Malcolm Performing at the Severn Valley Railway 1940's weekend

Great Malvern Station at 2122 on Friday 27th Jan 2012

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YOUR COMMITTEE

Hon. President	JAMES	G7HEZ	
Vice President	ADRIAN SIMMS	M3HBA	
Hon. Secretary	JOHN	M1EJG	(01562) 700513
Hon. Treasurer	JOHN	G8UAE	
Committee Members	NICK	G6DQN	
	MALCOLM	G8BOP	
	ANDREW	M6APJ	
	RICHARD	M1DBC	
	ADRIAN BRYAN	G0NLA	

CALENDAR OF EVENTS

It should be noted that the Shack will be open every Monday evening unless shown otherwise in the Calendar

February	Mon 6th	Informal - On air or natter
	Mon 13th	Open Shack Night - On air or natter
	Mon 20th	Open Shack Night - On air or natter
	Mon 27th	Informal - On air or natter
March	Mon 5th	Committee Meeting
	Sun 11th	10:00am to 3:00pm Wythall Rally
	Mon 12th	Informal - On air or natter
	Mon 19th	Open Shack Night - On air or natter
	Mon 27th	Informal - On air or natter
April	Mon 2nd	Open Shack Night - On air or natter
	Mon 9th	Open Shack Night - On air or natter
	Mon 16th	Talk on the Titanic – Peter Smith
	Mon 23rd	Open Shack Night - On air or natter
	Mon 30th	Open Shack Night - On air or natter