TRANSMITTING

The Museum of Communication Foundation Trust Members' Newsletter

No.111 May 2026

2026 EXHIBITION

"WHEN SCREENS WERE SMALL BUT THE MAGIC FELT HUGE"

100 Years of Television

Come in to see vintage TV equipment, learn about how it all began, what new technologies came as a result, go in front of a studio camera and play some retrocomputer games too.

Entry is free and everyone is welcome

Museum of Communication

You Must See This!

Opens May to end September Wednesdays and Saturdays only

11am to 4pm last entry 3.30pm

Free Entry for All!

MUSEUM OF COMMUNICATION
131 High Street
Burntisland KY3 9AA
www:museumofcommuncation.org.uk
email: enquires@mocft.co.uk

Scottish Charity SCO22004

Dates and Times

Museum of Communication Goudie Lecture

The Remarkable Mary Somerville

Queen of 19th Century Science

Ian Archibald

7.30 pm on Tuesday 16 June 2026

131 High Street, Burntisland KY3 9AA or by Zoom

Somerville College in Oxford, the first women's college, was named after Mary Somerville because of her strong support for women's education. Brought up in Burntisland, Mary Somerville was an astronomer, scientist, pioneering mathematician, geographer and gifted writer. What made this all the more significant was that she mostly self-taught at a time when education for women was not encouraged. Her talents and achievements were recognised in October 2017 when her head (and Burntisland) were featured on the Royal Bank of Scotland's £10 note.

To attend in person, e-mail enquiries@mocft.co.uk
Zoom link will be e-mailed to Members and Supporters

EDITORIAL

At this time of year, our 'big news' is the opening of our summer exhibition, which will take place this year on **Saturday 9 May.** It will be open from 11 am until 4 pm every Wednesday and Saturday until Saturday 30th September.

Person-to-person contact is an important part of the visitor experience that we offer. We are now taking names of volunteers to help in hosting the exhibition on Saturdays in May and June. You would not be on duty alone - we prefer to have a minimum of three people on duty each day.

If you would like to volunteer, or need more information about what's involved, please e-mail John Blackie on jphmblackie@aol.com.

A report on the Exhibition will feature in our next edition.

OBITUARIES

Sadly, we have no fewer than three obituaries in this edition. Each of the people commemorated made significant contributions to the Museum in different ways over the years. It serves as a reminder that many of our members are quite elderly and that part of our mission as a Museum is to inspire future generations and of the importance of attracting new members.

CONTENT

We are always grateful for material that will keep *Transmitting* interesting and varied. Please help by submitting items of Museum news or articles related to the history of communication.

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3 ways to donate to your Museum

1. **Donate online** at https://museumofcommunication.org.uk/shop/
2. **Make a bank transfer to:**
   Account Name: Museum of Communication Foundation
   Account No: 00508399, Sort Code: 80-17-37
   Be sure to include your name as a reference or we won't know who you are and your donation will be anonymous!
3. **Send a cheque** payable to 'Museum of Communication' to:
   Museum of Communication, 131 High Street, Burntisland KY3 9AA.

MUSEUM NEWS AND VIEWS

MUSEUM ACCREDITATION

Museum Accreditation is a voluntary scheme that sets nationally-agreed standards for museums in the UK. Museums Galleries Scotland is the assessing organisation in Scotland. Museums who hold the full Accreditation standard are invited to submit a return application every five years. Ours was submitted in time for the deadline of 30 November 2025.

As well as ensuring that we maintain proper standards, Accreditation is important when it comes to applying for grant assistance from various sources.

Museums Galleries Scotland currently have a backlog of returns to assess, so it may be a little while before we hear back from them. They will let us know when they have started our assessment.

NORTH WEST COMPUTER MUSEUM

We are always interested to hear about other museums with similar collections and objectives to ourselves. MoC Member Phil Phillips has alerted us to the North West Computer Museum in Leigh, Greater Manchester.

To find out more, see https://www.nwcomputermuseum.org.uk/ . Note that you must wait until the home page has completed its retro loading procedure before you can scroll the page properly.

NEW STAIRWELL DISPLAY

We were very pleased to obtain a small amount of funding from the British Vintage Wireless Society (BVWS) to make a new display of some of our older radios, which are not part of the 'official collection' but have not been seen by the public as they are not easily displayed without taking up a significant amount of the space needed for our themed annual exhibitions.

We have now built an interesting 'wall of radios' in the main stairwell, allowing us to release 31 radio sets into public display from the stores.

The project concept was based on an idea by Dave Pack, while Peter Barclay and Tom Stevenson installed the shelving.

John Blackie gets to work stocking the shelves

The finished display

MORE LECTURE SUCCESS

Our Goudie Lectures continue to be very successful, mainly due to the high-quality speakers that we're able to attract.

On 24 January, David Greig and and colleagues from Leonardo gave us a fascinating talk, explaining the social and political context of the TSR-2. The presentation included an impressive video of its flight trials.

It was good to hear that the technology developed for TSR-2 was not wasted on cancellation, but was adapted for other aircraft and other applications.

Prof. Andy Lawrence delivering his lecture to an appreciative audience

In our latest lecture, on 14 March, Professor Andy Lawrence of the University of Edinburgh, posed the question, "Is Astronomy Useless?" In it, he explained how astronomy contributes to science, technology, the economy and education, while facing challenges from light pollution and satellite interference.

IAN SMITH BEQUEST

We have received a substantial bequest from the late Ian Smith, who passed away in January 2024. This has been enhanced by a further donation from his family.

We had already received some interesting items from Ian's collection and his additional financial bequest was a clear measure of his support for the Museum.

Ian did a great deal of work on collections management, almost single-handed, over a long period. This laid the foundation for work that has been continued by Dave Pack and we are now in good shape for the upcoming renewal of our Accreditation.

When thinking about Ian, the word that comes to mind is dedication – he continued with his work, in declining health, long after lesser individuals would have quit. Ian clearly enjoyed his time at the Museum and he is greatly missed by everyone. We hope his family will maintain contact with us and we look forward to welcoming them on future visits.

OBITUARY - RONALD M. MURRAY
1949 - 2026

We were shocked to hear of the passing of our very active member Ron Murray on 15 January 2026 at the age of 76. He had been busying himself around the Museum only the previous week and did not appear to have any visible health issues.

Ron had a distinguished military and civilian career in the fields of signals intelligence and telecommunication. He had extensive knowledge and experience, which he was never slow to share with others. He always made his presence felt around the Museum, a presence that will be sorely missed.

David W. Brown

OBITUARY - KATHLEEN DAYELL
1937 - 2025

Kathleen was a founder member of the Museum of Communication Foundation Trust and she retained a keen interest in our activities for the rest of her life.

Her involvement with the Museum started when she was Chair of the former Bo'ness Heritage Trust. The Museum was at that time associated with the Trust and was instrumental in allowing the Museum to mount temporary exhibitions in the former Bo'ness Iron Company building that also housed the Trust's headquarters. She was an inspirational figure while Chair of the Trust, where she resolved several difficult situations with great skill.

It was hoped that the Museum would, in time, become established permanently in Bo'ness, forming part of an ambitious heritage development alongside the Bo'ness & Kinneil Railway and an open-air museum, along the lines of Beamish or the Ulster Folk Museum. However, funding challenges for the Trust, combined with the unexpected availability of a building in Burntisland resulted in the Museum moving to its current home.

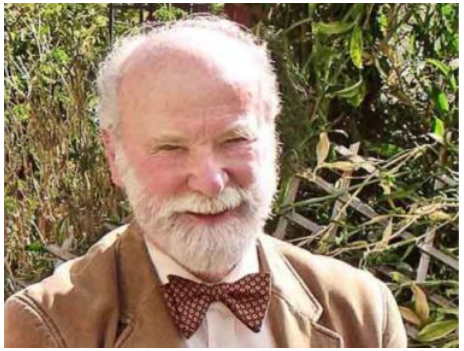
In the wider world, Kathleen was best known as the wife of the late Tam Dayell MP. This is, in a way, unfortunate, as it masks the great volume of hard work that she dedicated to a variety of charitable organisations.

She was also well known in her role as Property Manager at the House of the Binns, near Linlithgow, which the Dayell family gifted to the National Trust for Scotland in 1944. After marrying Tam Dalyell in 1963, she lived there for over 60 years, serving as Property Manager there until the Covid pandemic.

Her funeral took place in St Mary's Catholic Cathedral, Edinburgh, on 23 January 2026. The Museum was represented by David and Sheila Brown and by Marion and Ian McLean.

David W. Brown

OBITUARY - DR RAYMOND PARKS
1933 - 2026



Raymond was a great supporter of the Museum for many years, until failing health intervened. He was well qualified to discuss technical issues such as the finer points of magnetic tape recording, but it was with cameras that he excelled. His photographic skills were put to good use recording the Museum's annual exhibitions for *Transmitting*. Tom Stevenson recalls that his photographs always seemed to make the place look bigger and better than it was in reality – a truly amazing skill, which is greatly missed.

After graduating in engineering at Queen's University Belfast, Raymond worked in Stevenage, Chester and Sheffield before being awarded a PhD for his thesis 'Seismic refraction networks in the study of the Earth's crust' by the University of Edinburgh's International Seismological Centre.

He then worked as a Research Engineer for the Scottish Institute of Agricultural Engineering (SIAE) at the Bush Estate near Edinburgh. He was very proud of his mechanical potato, developed to measure the forces exerted during harvesting!

After retiring from the SIAE, he pursued a new role at the University, working in the area of musical acoustics and co-authoring several papers. He also worked with the University's Collection of Historic Musical Instruments during the 1990s and 2000s, cataloguing many instruments through his photographs and workshop drawings. He was made an Honorary Curator of the Collection in 2002.

He sold photographs to Oxford Scientific Films and contributed to several books. His love for Norway's landscape and nature, led him to spend many summers there, photographing rare flowers in the Arctic north. He was early to adopt digital photography and spent many years improving and remastering earlier pictures. During retirement, he also photographed Scotland's historic churches, with an especial interest in pipe organs. He provided the photographs for various releases from Delphian Records, including their book 'Organs of Edinburgh' and also spent time documenting the stained glass windows at Holy Trinity Episcopal Church, Stirling.

He is sorely missed by his family and by all who knew him. He will be remembered for his breadth of knowledge in many fields, his supportive, gentle nature, his attachment to bow ties and his wry sense of humour.

Nadine Thompson (daughter)

DESIGN INFLUENCES ON VINTAGE RADIO

Looking over radios in the stores and sorting them out for the new stairwell display reminded John Blackie of the many influences on radios from consumer and domestic design.

In the early 1920s, the radio was less a household object and more a piece of laboratory apparatus. 'Sets' were really collections (i.e. sets) of wooden boxes bristling with dials, brass terminals and glowing valves perched on top. They demanded space and patience: heavy batteries cluttered the room, horn loudspeakers or headphones sat nearby, and a long wire aerial stretched into the garden.

Yet as the wireless crept into domestic life, manufacturers realised that scientific complexity was not what most customers wanted. Radios began to disguise themselves inside familiar forms - a smoker's cabinet, such as the Gecophone Two-Valve BC 3200, a bookcase or an armchair - as if trying to live in the living room without disturbing the décor.

Marconiphone V2a Radio Receiver (1923)

Modernist designers, inspired by Bauhaus art and the 'machine' age pushed design into new territory.

By the 1930s, the radio had settled into a more confident identity. The self-contained table set, often in a warm walnut or veneered wood cabinet, became the fashionable choice. Speaker grilles borrowed the flowing curves of popular Art Nouveau, though the decade gradually favoured simpler, cleaner lines. At the same time, the glamour of cinemas, hotels, and ocean liners inspired a bolder Art Deco aesthetic, and suddenly the radio was not just an entertainment device but a fashion statement.

Set makers then started using architects and designers to increase

the appeal of their products. R. D. Russell worked for Murphy in the 1930s and 1940s; his wooden cabinets were functional, but looked back to the Arts and Crafts period.

The arrival of Bakelite and marbled plastics in the 1930s opened the door to shapes and colours that could never be achieved in wood. Ekco led the British market with its iconic round sets such as Ekco model AD65 by Wells Coates in 1934, objects that seemed to announce a new era. In America, lighter plastics and the vibrant colours of Catalin resin produced small sets of astonishing presence, such as the Air King Model 52 designed by Van Doren and Rideout who were inspired by the soaring New York skyscrapers or the FADA Model 1000 yellow/red Catalin "Bullet" radio in 1945.

In Britain, wartime privations reduced domestic radio to the plain wooden box with standard components. This was the 'Utility' or Wartime Civilian Receiver. It was designed by G.D. Reynolds of

Harold Van Doren and John G. Rideout Air King radios (c.1935)

Kolster Brandes KB FB10 'Toaster'

Murphy and, from 1944, over 175,000 were sold. In the States, with its post war booming economy, new cars with sweeping lines and vibrant chrome informed radio cabinets. British-made wooden and plastic valve radios of the 1950s are often considered less interesting but they reflect a more conservative economy here, with examples such as the Kolster Brandes KB FB10 - an iconic design commonly known as the 'Toaster'. It was produced from the 1950s with an 'ivory' case.

Television, of course was soon at the centre of family entertainment and radio became more of a personal accessory. Set makers targeted women buyers with vanity-case and handbag-style radios and portables were aimed at wealthy car drivers. German design was influential in focussing on a more functional look. When the first Japanese transistor portables appeared, a more 'international' high-tech style became the standard look by the late 1960s.

The advent of the transistor and the social revolutions of the 1960s gave the 'trannie' a new identity: it became the soundtrack of youth, a symbol of independence and rebellion. By the late 1970s, hi-fi systems and cassette players had pushed the simple radio into the background, though the style-conscious 1980s brought the large 'ghetto blaster', new digital systems to play CDs and a high-end market for FM table sets. Most of the market went for matt black models. Sometimes, cult designers plundered past styles and came up with witty anything-goes objects.

Looking back, radio design reveals a simple truth: everything is "on trend" at some point. Today, DAB and 'streaming' from smart phones and TV boxes dominate. The first live audio streaming event was broadcast

Marvel 6 Transistor Radio, Model YRM-6, designed by Kogyo in 1959

Tykho LA42 'rubber' radio by Marc Berthier for Lexon - a 1990s classic.

in September 1995 from a baseball game held in Seattle. Those oldest radios once banished to attics or sheds have become collectors' items - some retain the beauty of their design or highlight technical or social developments; some recall the era when they were created and how people lived in a past when 'consumer tech' was in its infancy.

John Blackie

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BRITISH BROADCASTING CLOAK

Part One: The 'Luminferous Ether'

The Twelfth in a Continuing Series of Monographs by Mervyn Hagger

You know that scene in the Wizard of Oz where Toto tugs the bottom of a curtain concealing a man in a suit who is twiddling dials? In that 1939 movie scene, an apparition suddenly looms large while inhabitants cower in fear beneath it. The phantom tells the curious not to pay any attention to the man behind the curtain.

While the Wizard was an invented character, the office of the UK Postmaster General[i] was real, but instead of conjuring up an apparition, his colleagues created an obfuscated piece of legislation called the Wireless Telegraphy Act 1904. It emerged from a chain of events that began with the 1660 creation of a politically-motivated censorship agency which became known as the General Post Office (GPO)[ii]. From there it began to expand in jurisdiction with every new development in point-to-point communications.


THE GPO PIRATE RADIO LICENCE

BROADCAST LICENCE. A 41602

WIRELESS TELEGRAPHY ACT, 1904.

Licence to establish a wireless receiving station.

APPARATUS USED UNDER THIS LICENCE MUST BE MARKED

3rd November 1922

WIRELESS WORLD & RADIO REVIEW.

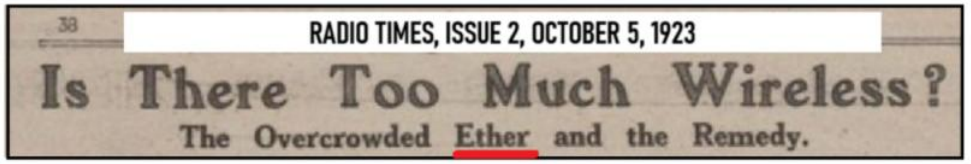
The first addition to that chain of regulations came with the UK Telegraph Act. It became law in 1868. It was followed by a High Court ruling on December 20, 1880, that telephones constituted telegraphs. In 1882, the Electric Lighting Act declared that street wiring could not be encoded with messages without permission from the Postmaster General. That edict was followed in 1904 by the Wireless Telegraphy Act, but there never was a Wireless Telephony Act.

INTO THE UNKNOWN

On May 3, 1880, U.K. Attorney-General Sir Henry James ruled that telephone exchanges required a GPO licence under the Telegraph Act of 1869 and compared telephone calls to telegrams for monopoly purposes[iii].

By equating a telephone call with a telegram message because they were both point-to-point or person-to-person communications, it blurred the line between Marconi's spark-gap transmitters sending Morse Code messages to specific recipients and Reginald Fessenden's carrier wave transmitters delivering the sound of voices and music to all and sundry.

Fessenden had no idea who, apart from engineers at his own experimental receiving station, could


38 RADIO TIMES, ISSUE 2, OCTOBER 5, 1923

Is There Too Much Wireless?

The Overcrowded Ether and the Remedy.

receive his transmissions. He was broadcasting messages just like a farmer scattering seeds in a field. His broadcasts predated Marconi broadcasts by several years, which led to years of patent disputes[iv]. Marconi's Wireless Telegraph Company Ltd in the U.K. gained use of patents similar to Fessenden's filings in the USA, via complex cross-licensing arrangements with the Radio Corporation of America (RCA), a subsidiary of the General Electric Company (USA)[v].

THE RELIGIOUS FACTOR

As if this story was not already complicated enough, we now turn to the advent of a cult that began during 1848 in New York, with two sisters promoting paid séances and trance mediums. By 1852, this decentralized belief system that came to be known as Spiritualism, had reached Keighley, Yorkshire where it intersected with the scientific investigations of William Crookes who concluded that there was evidence of a 'psychic force'.

In 1863, Crookes was elected to the Royal Society but it rejected his paper on 'psychic force'. Critics then turned to attempting personal smears of his character. Crookes persisted with his ideas and in 1874 he published 'Researches in the Phenomena of Spiritualism'. In 1897 he was knighted, and in 1913 he became President of the Royal Society. Scientists came to his rescue. Among them was Alfred Russel Wallace, co-worker with Darwin on 'Natural Selection'. He was joined by pioneering electrical engineers Cromwell Fleetwood Varley and Sir Oliver Lodge. Now the scientific foundation of electrical communications had become wed to the ethereal foundations of Spiritualism, and Lodge became one of its primary advocates. It is where the laws of physics and the doctrine of Spiritualism collided.[vi] Both believed the same thing.

SUPERSEDED SCIENCE?

But while laboratory scientists looked for demonstrable evidence, true believers merely accepted scientific findings as proof that the living could talk to the dead. What made this period in time so interesting was that some well-known scientists like Lodge, were also true believers. They included Clerk Maxwell, Nikola Tesla and Heinrich Hertz.[vii]

What these electrical engineers all held in common was a belief in something called the theory of 'luminferous ether'. It was a theory because it could not be observed by visual examination, and yet for a

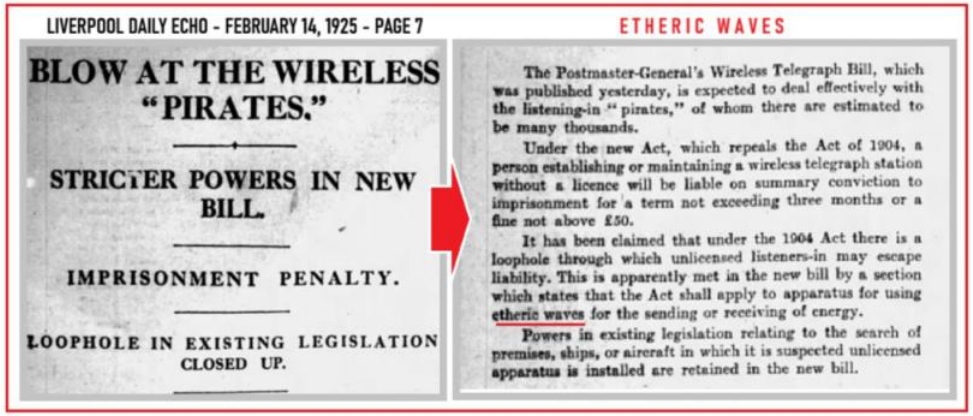
time, it became the mysterious bedrock of both Spiritualism and broadcasting in the world of Guglielmo Marconi. In 1905, Albert Einstein countered with a theory of his own, but he was in the wrong place at the wrong time. His home at that time was in Germany, and his ideas later ran headlong into the non-compatible ideas of Adolph Hitler.

The question was not about directing traffic on the airwaves, but only allowing authorized traffic onto the airwaves. To enforce this Act, the GPO targeted stations which were defined as places or locations. The 1949 Wireless Telegraphy Act[viii] demanded that a licence must be obtained from the GPO before any station could be named, then used, equipment installed and the equipment used for wireless telegraphy. It was therefore illegal to just own a transmitter or a receiver, if the appropriate GPO licence had not been previously obtained. This 1949 Act was in keeping with the 1660 idea behind creating the GPO as a monopoly to censor messages, and not as an Act to make sure that all traffic flowed without disruption.

RECALLING THE ELECTRICAL GIANTS

The dismissal of luminiferous ether as superseded science is attributed to the 1887 experimental work of physicists Albert A. Michelson and Edward W. Morley who set out to detect whether this hypothetical and unseen matter carried light waves through space. Their conclusion was negative. They could not detect an "aether wind" and their finding contradicted expectations. Therefore, they claimed that it discredited ether theories.

In 1905, the year after the Wireless Telegraphy Act became law, Albert Einstein published his theory of relativity which indirectly supported the work of Michelson and Morley. But in one sense it did not offer a replacement theory, it merely discredited an existing theory in the minds of many. The problem then was that most of the leading electrical experimenters such as James Clerk Maxwell, Nikola Tesla and Heinrich



LIVERPOOL DAILY ECHO - FEBRUARY 14, 1925 - PAGE 7

BLOW AT THE WIRELESS "PIRATES."

STRICTER POWERS IN NEW BILL.

IMPRISONMENT PENALTY.

LOOPHOLE IN EXISTING LEGISLATION CLOSED UP.

ETHERIC WAVES

The Postmaster-General's Wireless Telegraph Bill, which was published yesterday, is expected to deal effectively with the listening-in "pirates," of whom there are estimated to be many thousands.

Under the new Act, which repeals the Act of 1904, a person establishing or maintaining a wireless telegraph station without a licence will be liable on summary conviction to imprisonment for a term not exceeding three months or a fine not above £50.

It has been claimed that under the 1904 Act there is a loophole through which unlicensed listeners-in may escape liability. This is apparently met in the new bill by a section which states that the Act shall apply to apparatus for using etheric waves for the sending or receiving of energy.

Powers in existing legislation relating to the search of premises, ships, or aircraft in which it is suspected unlicensed apparatus is installed are retained in the new bill.

Hertz all believed in the theory of "luminferous ether". It was also the belief system in the wireless world of Guglielmo Marconi. Sir Oliver Lodge not only believed in the practical explanation for the transmission of wireless signals by means of the ether, but he was also a champion of its religious application called Spiritualism. Lodge believed that it made communication with the dead possible. In this regard he was joined by Sir Arthur Conan Doyle, who, unlike his character Sherlock Holmes, strayed from elementary evidence into controversial seances. The net result was that the 1904 Wireless Telegraphy Act offered no scientific proof that there existed a definable matter for the Postmaster General to grab as the exclusive property of the GPO. But grab it he did. Seen in the light of British television satire, it was akin to the Monty Python sketch about the 'Royal Society For Putting Things On Top of Other Things'[ix].

THE UNCODIFIED BRITISH CONSTITUTION

Because the UK does not have a codified written constitution, it relies upon successive pieces of legislation that gobble up and incorporate previous legislation. Amendments are made by additions and deletions, but anyone searching the Wireless Telegraphy Act of 1949 for the scientific theories upon which it rests, will draw a blank. They are not there. Both Einstein's theory and the theory of luminferous ether are intangibles that cannot be examined.

Dictionaries tell enquiring minds that ether (aether) refers to "a pure, upper-sky substance breathed by ancient Greek gods", and as an alternative explanation it is also described as "a hypothetical medium for light in physics (now obsolete)." The mendacious aspect of the latter definition is that Acts of legislation which rely upon the theories believed today, but denounced as false tomorrow, are not branded as pseudo-science, but merely as "superseded theories". Any legislation which rests upon the original interpretation stays in place. It's not immediately struck off the books as resting upon a falsehood. That is the job of qualified legal experts.

UK legislation does not require scientific backing. That is something kicked-down-the-road to be tried and tested before judges and juries in British courts of law. However, what usually happens is that the law against which an alleged violation is tried, has been accepted as though it is based upon a solid scientific foundation. On extremely rare occasions a jury has been known to nullify the application of law.

RESEARCH TRIGGER

Way back during February 2021 in *Transmitting* 94, beginning on page 16 et seq, I wrote the first monograph in this series. It arose out of a disastrous lecture that I attempted to

deliver on Saturday, October 25, 2014, at the Museum in Burntisland after reading page 276 of *Radio Man: The remarkable rise and fall of C.O. Stanley*. That lone paragraph destroyed almost everything that I thought that I knew about the 1964 creation of Radio Caroline. The book was published by the prestigious Institution of Electrical Engineers, which is the same body that lent its office space for the initial formation committee meetings leading to the creation of the British Broadcasting Company Limited on December 15, 1922.

In 2026, I turned to page 86 of that same book with the intention of merely expanding upon another of its controversial statements. This one had to do with a shocking revelation which took place in 1954 at the Old Bailey. Ultra vires, the GPO had been collecting licence fees for wireless transmissions[x]. The choice facing the GPO was to give back millions of Pounds, or for Parliament to pass an ex post facto law that allowed the GPO to hang on to the money. Parliament passed an ex post facto law which, because failure to pay the licence fee constituted a criminal offence, would have rendered that Act in violation of the U.S. Constitution which prohibited certain types of ex post facto laws.

The case gathered a certain amount of attention in the UK, and a lot more attention in U.S. newspapers. While Parliament cured the immediate threat to the GPO licensing methods, it did not address the foundational missing text in the Wireless Telegraphy Act itself. The case was brought against the GPO by a Colchester haulage company represented at the Old Bailey by Sir Hartley Shawcross. Pulling the strings from the shadows was Charles Orr Stanley, Chairman of the Pye Group of companies based in Cambridge, England. A quick search for this case did not produce results, and so I deferred to two online newspaper archives that I have access to. That is how I came across a 1927 newspaper article about proposed modifications to the Wireless Telegraphy Act of 1904.

HOW MILLIONS OF POUNDS JUST DISAPPEARED

It was by following the threads generated by the Old Bailey lawsuit and then digging deep into the foundation of the Wireless Telegraphy Act 1904, that I stumbled across the controversy surrounding the question of luminferous ether. It had come to a head in 1927 over failure by many people to pay for GPO wireless receiving licences, and while one newspaper announced that its flawed text would be amended by including specific wording relating to the ether, when it came to pass, this new version of the law decided not to mention the ether at all.

The key to understanding what happened in 1954 is in the final name of the new law. It was called the 'Wireless Telegraph (Validation of Charges) Act'[xi], because no one wanted to call it for what it was, an Act of Deception. In 1925 the same problem had been faced over so-called 'pirates' who would not pay for a GPO licence. The new Bill before the House of Commons was supposed to "close-up a loophole" in the Wireless Telegraphy Act 1904 by providing the Government with "control in an emergency over, in short, the utilization of etheric waves", which, according to a gobbledygook explanation, became "superseded science".

No wonder that the 1954 case brought before the Old Bailey received widespread mocking coverage in the American press and little coverage in the United Kingdom. In one sense this is just the beginning of a very complicated story. When I discovered what had happened in 1954, I had to return to 1904 and the previous actions of governments dating back to 1660. That is how I also stumbled across the pirate listener's case of 1925, followed by a move to plug-up a hole in one law with another law based upon luminferous ether, which scientists later claimed did not exist.

All of this is cause for wondering whether Crown-controlled BBC broadcasting is about to come to an end with in-depth examination of the foundation upon which 'TV Licensing' now rests.

To be continued

[i]1903–1905: Edward Stanley (Lord Stanley); 1905–1910: Sydney Buxton;1910–1914: Herbert Samuel; 1914-1915: Charles Hobhouse; 1915–1916: Herbert Samuel (again);1916 (Jan–Dec): Joseph Pease; 1916–1921: Albert Illingworth; 1921: Frederick Kellaway; [NO Postmaster General during 14-day gap from] Frederick Kellaway's resignation on 19 October 1922 to Neville Chamberlain's appointment on 2 November 1922; [This was the crucial time period during the formation of British Broadcasting Company which was registered as a limited company on December 15, 1922, but NO licences were issued to it.]] 1923 (Mar–May): Sir William Joynson-Hicks; 1923 (May–Jan 1924): Sir Laming Worthington-Evans.

[ii]Previously documented as part of this continuing series of monograph published in *Transmitting*.

[iii]See: Attorney-General v. Edison Telephone Co. of Great Britain upheld on appeal to the House of Lords.

[iv]Marconi's patents were largely invalidated by the US Supreme Court in 1943 (Marconi Wireless Tel. Co. v. United States) due to Fessenden's earlier filing of his patents.

[v]Previously covered by earlier monographs in this series.

[vi]https://doi.org/10.1080/07341512.2016.1217598

[vii]Ether and Modernity, Jaume Navarro (Editor). ISBN-10 : 9780198797258

[viii]https://www.legislation.gov.uk/ukpga/Geo6/12-13-14/54/section/1/enacted

[ix]https://www.youtube.com/watch?v=LFrdqQZ8FFc

[x]*The Guardian*, page 2, December 11, 1954.

[xi]https://www.legislation.gov.uk/ukpga/Geo5/15-

POLAVISION VIEWER

MoC Object No 6362

The Museum has recently received a donation of a Polaroid 'Polavision' viewer. We wouldn't normally take a photography item, but there is an interesting story behind this equipment.

Polavision was an "instant" colour home movie system, launched by Polaroid in 1977. The commercial failure of the 'Polavision' system was in no small part due to the availability of competing video-cassette systems such as Betamax and VHS. The Polavision viewer therefore provides an interesting link between older and newer technologies.

WHAT WAS POLAVISION?

Most readers will be familiar with Polaroid cameras, invented in 1948, that revolutionised photography by giving users images that developed within minutes. The inventor of this system, Edwin H. Land, attempted to pull off a similar coup with cine format film.

The Polavision film cartridge reproduced colour by an ingenious additive method. It used a black-and-white emulsion on a film base covered with microscopically narrow red, green and blue filter stripes. Once exposed in the Polavision camera, it could be very quickly and easily developed in the Polavision viewer, which contained the processing unit, and be ready for viewing in only a few minutes.

The film width was 8 mm, film length 38.5 feet, frame size 4.2 x 5.7 mm, 2800 frames per cassette and packaged in a sealed cartridge. Filming time was 2' 30" at 18 fps.

Polaroid had some success in niche markets, such as industrial testing, where price wasn't so critical and getting the images quickly was a positive selling feature. Also, some artists, such as Andy Warhol, embraced the format.

WHAT WENT WRONG?

1. The filtering layer, which only allowed red, green or blue light to pass through any given point, caused light loss. This meant that the film had relatively low light sensitivity (40 ASA) and the developed footage had an overall veil that appeared to be a neutral grey. Contemporary reports called the images "murky and dark".
2. The system used a stand-alone tabletop viewer to minimize the problems inherent in projecting such dense film. Resembling a small television, it developed the inserted film cartridge, rewound it, then projected the film onto a translucent screen from behind. The film could not be erased and reused, or shown on a real television set with a larger screen, and there was no sound.
3. The system was late to market and had to compete with upcoming Betamax and VHS video cassette-based systems. In the late 1970s, these systems had the disadvantages of much greater bulk and much higher initial hardware cost.

However, a standard video cassette ran for at least an hour at the highest-quality speed, while a Polavision cartridge contained less than three minutes of film, at a far higher per-minute cost than the finest videocassette tape.

Polavision proved to be a major commercial failure, and was discontinued in 1979. Most of the manufactured equipment was sold off as a job lot at a loss of $68.5 million for Polaroid. In the wake of those losses, the chairman and founder Edwin H. Land resigned the chief executive position in 1980 and left the company two years later.

However, the underlying technology was improved and used as the basis for the Polachrome instant colour transparency system introduced in 1983.

LATER DEVELOPMENTS

Polaroid Corporation peaked in the 1970s and 1980s but later faced financial difficulties, filing for bankruptcy in 2001. The brand and assets changed hands (and name) multiple times, returning to the Polaroid name in 2020. Although Polavision is long gone, today Polaroid B.V instant photography cameras and film continue to be produced under the revived brand.

Dave Pack

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BAIRD'S WORK IN SCOTLAND

With this year's exhibition theme of celebrating 100 years of television development which will include a replica of Baird equipment it is worth sharing a fascinating story concerning the early work of John Logie Baird in Scotland. This comes from a local historian in Falkirk, Ian Scott, who regularly writes on local history topics in and around the Forth Valley, has given his permission for the Museum of Communication to reprint his article, first published in the Falkirk Herald *in June 2022. A few additional points from references have been inserted (shown in bold) into Ian's original text.*

As every schoolchild knows (or ought to know), television was 'invented' by John Logie Baird of Helensburgh. What all Falkirk 'bairns' (as those born locally are called after the old 18th C motto: 'Better meddle with the devil than the bairns of Falkirk') should know is that the town has a strong claim to the inventor, whose ancestors were Camelon farmers and who carried out much of his pioneering experimental work here.

Baird's great-grandfather was the tenant of Sunnyside Farm, and his grandfather farmed at nearby Sunnybrae. Had his father decided to follow the family business, the young John Logie Baird might have become a 'bairn' but John senior chose the Ministry and was called to serve in the West Church in Helensburgh. It was in the Manse there, on 13 August 1888, that the great inventor was born.

As he grew up, we can be fairly sure that Falkirk—and his grandparents' farm—was a regular port of call, so we should not be surprised to find him, at a much later date, working in the town on his most famous project.

Historians who have studied Baird's life are often exasperated by the gaps and contradictions they cannot explain. Keeping secrets is the mark of an inventor fearful of the prying eyes of rivals and, in Baird's case, we have the added suspicion that he was doing work for the Secret Service.We do know that in the early 1920s he came into contact with John Hart (1896–1973), the owner of a radio supply shop in Falkirk.

Jean Hart later recalled that her husband, in about 1922, "built and sold radio receivers before they were generally manufactured, he was experimenting in radio before they had any radio stations at all".

Hart was a highly talented electrical engineer with special knowledge of radio transmission, so the pair had much in common. It seems that Baird came to Falkirk and worked with Hart in his workshop in the Pleasance, and that members of the local Radio Club were familiar with Baird and aware of his work. It may have been during this time that the first public demonstration of television took place.

I say may because this event—if it did take place—is shrouded in mystery and is not acknowledged by Baird's official biographers. They will tell you that 22 Firth Street in London's Soho was the real venue in January 1926. The Falkirk claim is based mainly on an account by the late Robert Shaw, a celebrated pattern-maker of Larbert.

Some years ago, I heard him tell the story of how, as a boy, he was sent by his teacher from the Science and Art School to see a special demonstration in the Temperance Café in the High Street. It was December 1925. He said that during the evening Baird invited him to be the subject of a transmission, and that his image was sent to a receiver in another part of the building.

Residents recalled the man with the striking blue eyes who was often in Hart's shop when they came to have their accumulators charged or to buy radio parts. Baird was said to have been a reasonably frequent visitor to the town, sometimes staying in the Royal Hotel and sometimes with a family in Camelon.

It seems perfectly plausible, but little confirmation—by way of newspaper reports or other eyewitness accounts—has been found. When Hart visited Baird in London in 1926, he was given a piece of apparatus with instructions to place it in a Scottish museum.

Known as the 'Falkirk Televisor', it is acknowledged as Baird's work and

Baird working on one of his early sets

was probably a prototype of the machine used in London. John Hart moved to premises at the east end of the High Street, where the apparatus was displayed in his window. It may have been used in 1927 in a special transmission between Glasgow and London.

It is now in the Falkirk Museum collection, but the public get little opportunity to see it, which is a great pity.

Ian Scott, 2022

Additional note on the Falkirk Transmitter

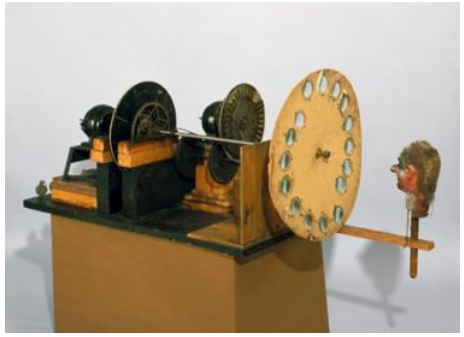
The Falkirk Museum archives suggest that, like the Science Museum version, their unit also had claims to be the original television transmitting section used by Baird in the experiments that took him from crude outlines to true television. Half of the apparatus was missing, but what remained indicated that the unit was capable of beaming pictures across the Atlantic and beyond, and that it incorporated elements of a three-dimensional television system.

Baird's first public demonstration of transatlantic television did not take place until 1928, so he was clearly running ahead of himself again with the Falkirk unit.

The Falkirk machine was probably used in transmissions between Scotland and London. The museum archives point clearly to its use at a date later than the presentation to Mr Hart. They describe it as: *"the transmission portion of apparatus used by Mr J. L. Baird in the experiments which led to the transmission of human faces from Glasgow to London on January 27th, 1927, a previously unknown event."*

In 1928, Mr Hart staged a radio exhibition in Falkirk, where Baird was photographed with the transmitter. Also in the photograph was a dummy quite unlike any seen in Baird's published work and presumably used in his secret experiments in Scotland.

The late Antony Kamm, publisher, author and Baird historian, wrote: *"The Falkirk apparatus is not a 'televisor'. Its basic components equate precisely to those at the transmitting end of the apparatus which Baird used early in 1926, if not actually at the 26 January public demonstration. A drawing of this model by Baird himself was used to illustrate his article in* 'Experimental Wireless and the Wireless Engineer' *in December 1926."* The Falkirk transmitter is accepted as genuine, or largely genuine, by John Trenouth, Senior Curator of Television at the



John Logie Baird's equipment in Falkirk (credit: Falkirk Museum collection)

National Museum of Photography, Film and Television. A clip of film survives showing an identical piece of apparatus working in a 1929 British Pathé newsreel.

In the 1960s a member of staff at Falkirk College was given permission to remove the machine from storage. As the Nipkow disc had been damaged by water and was disintegrating in places, it was decided to replace the two sheets of cardboard that held the lenses. The lenses were then put back and fastened with the original screws.

John Blackie

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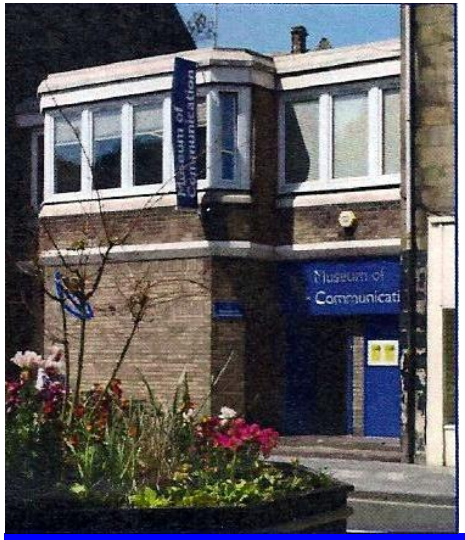

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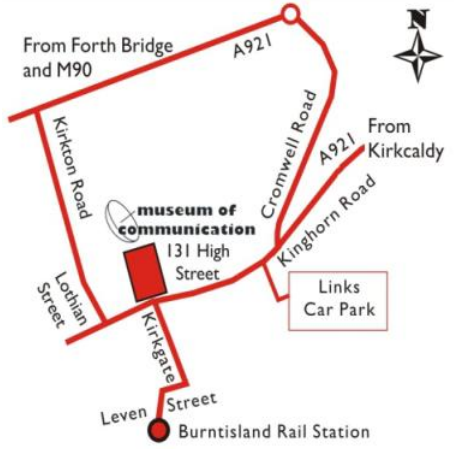

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