



# 75 Years

of the SCTE

By Dr Roger Blakeway FSCTE, CEng

**The SCTE has had a long and impressive history, and when we turned 75 Dr Roger Blakeway worked hard to assemble memoirs from the late Tom Hall and produce a written history of his time at the helm. Then COVID-19 landed and our plans were shelved temporarily, so it is now published as we turn 78 this year. All members will receive a hard copy of this as a souvenir and a thank you. It seemed only right to produce excerpts in place of this issue's Long Read. Put the kettle on.**

## Early Years

The early history of the Society is largely based on memoirs of the late Tom Hall MBE, a founding member, the Society's Secretary for some 40 years and then a Director of the Society until he died in 2002.



**Tom Hall after receiving his MBE in 1990.**

Tom was a self-made man, leaving school at 14 and attending night classes to teach himself about radio communications. Tom began his career at a radio relay company, becoming an engineer for a group of radio relays in the Midlands. At the beginning of World War II he was appointed Southern Area Secretary of the Relay Services Association (RSA), which was later to become the Cable Communications Association (CCA).

The Society of Relay Engineers was formed in September 1945, with Tom a founding member and in 1947, he was appointed as successor. His role included ensuring the continued publication of the journal you are reading now, then entitled Cable Telecommunication Engineering or CTE for short.

## The Broadband Revolution

Until the 1980's Cable TV was essentially delivered by multiple twisted pair or by 'narrowband' coaxial systems. Both delivery options left room for only a few channels and indeed there was not much need for many more since the content didn't exist.

The advent of true Broadband Cable had its beginnings with the Annan Report on The Future of Broadcasting in 1974. The CTA, with Society input, made an important submission to the Annan Committee on the capability and potential of cable television. It was not until 1984, however, that the first Broadband Licences, 11 in total, were issued following a further government enquiry set up by Margaret Thatcher and chaired by Lord Hunt in 1982. Whilst welcoming the availability of the new franchised area concept, with protection against competition, the licenses for Interactive Cable Television Networks were biased and had better terms of 21 years against the traditional 'tree and branch' systems of only 15 years.

The early pioneers found progress hindered by unforeseen civil construction issues and high equipment costs. Various solutions emerged over time, some cutting edge, some more traditional, but all were affected by the government's withdrawal of capital allowances, leading to momentum stalling throughout the latter half of the 80s, as jittery investors



lost confidence and exited the market. A lack of actual content in the era before BSkyB compounded matters.

One of my own favourite moments with Westminster Cable was jumping into a cab and shouting “10 Downing Street please!”. Having fixed a connector problem on the distribution amplifier in No. 10, I was retuning the TV set in Sir Bernard Ingram’s press office and listening to him grumble about the ‘rubbish’ on TV when a tap on the shoulder and a “Could you have a look at our TV in the flat please!” sent me scurrying after Margaret Thatcher herself up several flights of stairs, carrying a large spectrum analyser on my back (I later found that there was a lift but she never used it). Luckily the initial connector problem had already fixed the Iron Lady’s problem. A cup of tea with the PM and I retired pleased, but exhausted, with a cameo tale to tell.

The service provided to Downing Street was technically interesting too. There was an existing UHF MATV system serving some 30+ outlets spread across Nos 10, 11 and 12. Westminster Cable provided an extra 6 channels on this network via their switched star network, using three 2-channel units adapted from the normal home STB. Since the feed to these modules required a bandwidth below 150MHz, BT was able to feed them from a switch in Victoria, over 700 metres away, via three 1¼” coax cables. We were looking forward to feeding Buckingham Palace in a similar way, but were forstalled by one of the Royal Household expressing the view that ‘Cable TV programmes were a bit common’. Much later, I was told by Dave Hodges, then Chair of the CAI, that he had been involved in finally connecting the Royal Residence to the world via satellite.

The situation for UK Cable changed significantly in the early 90s with more licenses being available; and the rule change to allow foreign investors. By 1995 the construction of Broadband Britain was in full swing, having had a further impetus from the Duopoly Review in 1992 which allowed Cable Franchises not just to ‘connect’ to the two existing Telecommunication Operators, BT and Mercury, i.e. provide the local loop, but also to switch their own traffic. This attracted additional investment funds from the USA with the ‘Baby Bells’ like Nynex, US West and South Western Bell and Bell Canada being significant players. It was in this era that cable suffered from severe negative public relations delays, construction work, damage to trees, even to a flood extending to several streets and many million pounds worth of compensation caused by a Videotron contractor spiking a 16 inch water main that was in the ‘wrong place’ on the Water

Utility map. During this period the CCA (Cable Communications Association), led by Richard Woollam, was very proactive in trying to improve the image of cable.

By the late ‘90s, many of the MSOs had significant build under their belts and were predicting going ‘operating cash positive’ in the near future. This of course meant that the franchises were at last becoming real potential money spinners and the time had come for a further round of acquisitions and mergers ‘to optimise the economies of scale’.

In the UK, 2001 OFCOM was launched, replacing previous single industry regulators such as OFTEL ITC and the RCA.

OFCOM promised ‘light touch’ regulation; many of us thought this developed into a lack of interest in cable itself, relegating it to a minor part of a greater picture of communications and broadband roll-out. The concept of unique franchised areas eventually disappeared in the name of ‘open competition and level playing field’. This did little for rural areas, since the new competitors concentrated on dense urban conurbations where the cost of homes passed was less and the opportunities greater.

## Broadband Journal inception and development

Publishing a high-quality technical Journal imposes quite severe financial strain on the resources of a relatively small Society such as the SCTE. However, it is undoubtedly one of the most important benefits derived from membership of the Society, as well as being its flagship at all important national and overseas industry events.

Therefore, the incorporation of CTE within the American publication International Cable was a necessary measure to continue publication. This took place in Spring 1990 and continued until the end of 1991. The editor of International Cable was Ron Hranac, well known to all our members to this day.

Publication as a separate entity re-started with the first quarter edition of 1992 with Tom Hall continuing as Editor. With his impending retirement, Tom handed over the reins to Dan Smart at the end of 1992.

A period of change followed this with a variety of parties involved, ostensibly to help with the publishing costs, offset by advertising sales. International Cable incorporated CTE as its strapline, echoing this involvement. As the industry



matured and merger, acquisitions and Chapter 11s affected the Journal's fortunes and by June 2003 advertising had plummeted and we were down to a single advertiser. It was decided that all marketing and advertising would now be the responsibility of the Society, which, not for the first time, forced the SCTE into unfamiliar territory.

We had no real expertise or resource to devote to advertising sales but, thanks to the growing income from IBC, we were able to absorb the rising cost of publication. In March 2006, following a strategy review (as part of our 2005 60th Anniversary), we changed the name of the Journal to 'Broadband'. The idea was emphasise the fact that 'Communication' in our name meant more than just cable TV and cable was more than just coax.

As part of our 60th year strategy, we also decided to update our archives. All our journals from the first one in 1946 to the present day were digitised and stored on our website. A laborious process but a vital one.

Our editor, Dan Smart continued until the August 2007 issue when he decided to retire after 15 years of devoted service both to the Journal and the Executive Committee. His exit prompted the decision to appoint a Managing Editor for the first time, formalising the sales, marketing and promotion functions necessary to grow the business.

In early 2008, Sara Waddington joined us as Managing Editor. It is easy to underestimate the significance of the 13 years of hard work that Sara contributed. She attended the majority of external events and exhibitions over the years, with a heavy workload; selling advertising, membership and sourcing papers and articles for the journal. Her personality and drive resulted in strong relationships within the industry and many good and enduring contacts. It was with great sadness that we learned in mid 2020 that she had decided on a change in direction for her company and would end her contract with the Society at the end of the year.

Recruiting a replacement for Sara was not an easy task. We were deluged with applications and our current President, Tony Basham, Beverley and myself spent a considerable time poring over spreadsheets analysing their previous careers, skillsets and potential to undertake the Managing Editor role. In the end we had a shortlist of 5 possibles and set up Zoom interviews with each, another 'sign of the times' with COVID-19 precluding a physical face-to-face meeting. Our final choice, and an outstanding candidate, was Melissa Cogavin.

Melissa joined us in the October 2020. A sign of the times was that we had to wait some eight months to meet Melissa in person but she does qualify for our 75th celebration by a couple of months!

We expected that, with someone new at the helm, we would see changes in Broadband to reflect a changing environment and readers expectations. After three years, Melissa has produced countless very successful issues of Broadband, developed new editorial features to showcase our membership and industry trends, grown our membership, modernised our on-line communications, social media, website and set up a Society group on Facebook and LinkedIn. She has also been instrumental in driving the launch of our webinar and podcast programme, designed to complement our 'normal' SCTE Lectures.

In times when electronic publishing is becoming more popular, we still see 'Broadband Journal' as a vital means of keeping contact with members and dissemination of both technical content and Society news. Many trade magazines in our industry have found the cost of print and physical distribution to be uneconomical and have either ceased publication or moved to on-line only versions. Advertising income is no longer sufficient to cover both editorial and print/distribution costs but the Society believes the additional expense is still worthwhile. Broadband is a respected publication within the industry and increasingly viewed as the official magazine at industry trade shows; we believe that we have a duty to ensure that, resources permitting, it will continue to thrive for many years to come.

## Standards Development and the rise of EuroDocsis

The SCTE has been involved with standards for the cable industry for most of its 75 years. By the start of the '90s there was a move to harmonise standards over the European Union. Brussels was the home of cable standards through Cenelec, through SCTE Members Russel Eberhardt, Dan Smart and David Kent. Ray Seacombe chaired the UK National Cable Standards Committee at BSi. As time went by Dave Keeley, David Wollard, Chris Eccles, Janhein van Brien, Richard Harris, Tony Basham, amongst others represented the SCTE. I took over from Ray as Chair until 2018 when I handed over to Dave Hodges.

This century has seen another period of change; a harmonisation process with a common hierarchy of standards. As an example the world standards for cable networks will be issued by IEC in the IEC60728 series; CENELEC will issue a European version (a subset modified only as necessary to comply with EU mandates) as the EN60728 series and finally BSi will issue a UK working version as BS EN60728, which will be identical under EU regulations to the CENELEC version.

The role of BSi has changed and there is no longer an active Cable Standards Committee, Dave Hodges now chairs a virtual committee and any new standards work emanating from either IEC or CENELEC are circulated to 'interested' parties such as Virgin Media, Ofcom, the CAI, BSkyB and suppliers for comment. Responses are passed through BSi as a National Committee recommendation to IEC or CENELEC. With the disappearance of the CCA, the Society is now the only body representing the Industry in these two forums.

DVB and EuroDocsis became intertwined in 1999. With buy-in from all major manufacturers and MSOs it became the major influence in defining the modern digital world, although not a standards body. It produced specifications which either ETSI or CENELEC would then rubber stamp and issue as standards, the first ones appearing as early as 1995.

DVB addressed issues specific to Cable and produced a specification for return path traffic related to interactive TV applications (DVB-RC). CableLabs in the USA continued to work on a common standard for modems. Early deployment in the UK by ntl used MCNS modems for economic reasons and since DVB-RC was not mature. In the DVB forum, however, ntl strongly supported DVB-RC both for STB return path data and for cable modems with stated intent of withdrawing the

MCNS modems when DVB-RC ones became freely available. Cable & Wireless took the same view on choosing to deploy the most widely available and cheapest MCNS (now called DOCSIS) modem solution but saw no reason why they should not exist in parallel to DVB STBs but with a common return path specification.

Such a view was anathema to the committed DVB technical group and as the representative of Cable & Wireless at the DVB board meetings, I had the unpleasant task of informing them that we would be deploying DOCSIS solutions for the long term on our networks. DVB decided that they would not consider any change to DVB-RC to provide compatibility or inter-working with Docsis and with the backing of ECCA would proceed with the 'Euromodem'.

An alternative strategy was required and my position in the popularity stakes was further diminished when, together with Richard Catchpole of Nortel, (who did most of the documentation work) and Andy Mullens of Motorola we fought to get a European version of Docsis (EuroDocsis), accepted as an appendix to the ITU-T J112 specification, and then to convince ETSI to develop EuroDocsis as part of the cable modem standard alongside the DVB-RC. We had little support from the DTI or Ofcom in this fight, but by July 1999 we had succeeded in getting agreement for parallel development of the two standards. It was at this time that I left Cable & Wireless and the work was taken over by David Woollard who was successful in pushing through the work to completion, together with involvement with the TOCOF (Telecom Over Cable Operator Forum) working group which later developed into TcomLabs. It is interesting that following the absorption of Cable & Wireless into ntl, a strategic technical review decision was made to commit to EuroDocsis and withdraw from the DVB-RC solution. Even DVB became more placatory when it was obvious that EuroDocsis would succeed and liaison now exists between CableLabs and DVB on current and future work.

## The SCTE and IBC, a venture into Europe

It would be a serious omission in a history of the Society not to mention the relationship between the SCTE and IBC, the convention held annually in Amsterdam. When I first took the role of President in 1992, I inherited a financial situation that was decidedly shaky. The expansion of the member base was seen as a priority by the Executive Committee and the introduction of the Technician grade and SCTE training courses were part of the strategy. We saw that membership



**Our first stand at IBC 1995**

outside of the UK and traditional ‘ex-pat’ areas was an opportunity for expansion, but we had very limited funds to explore the market in Europe. Luckily my employer, Videotron, supported the Society and enabled me to chair sessions at IBC in Amsterdam in 1992 and the Montreux Convention, to get the SCTE name noticed outside the UK. Following the IBC event, I provided to the conference organisers what I thought was a constructive critique about the lack of cable content in a show in a country that had a cable penetration of 92%. Shortly afterwards I was invited to join the IBC Conference Committee with the specific task of looking after the Cable sessions.

Our commitment to IBC must have impressed the management and the SCTE was invited to sit on the Management Committee of IBC. IBC prospered in Amsterdam and in 1996 moved from a biennial to an annual event. It soon became obvious that a lot more resource was needed to run the show and a more efficient structure was required. A small strategy team was set up by the President, John Wilson, consisting of David Woods from the EBU, Mike Martin representing the Broadcast Manufacturers organisation, the IABM and myself. The conclusions were not difficult to reach; IBC had become a multimillion pound business and needed to be run by a committed, full time operations team with control of its own finances. Within that simple statement, however, lay a raft of problems and potential booby traps; how to maintain the ethic of IBC ‘for the Industry by the Industry’ whilst running it efficiently as a business, how to keep the large army of industry volunteers to man committees and provide ideas

and, perhaps most importantly, how to move the financial control away from the IEE, its original owners, to make IBC independent.

It took a great deal of lobbying by John Wilson and the Vice President Mike Cox to bring the IEE to the table and many round-table meetings with representatives of the other organisations on the Management Committee before we finally agreed to set up a partnership to run IBC. Of significant importance to the SCTE was the agreement to share any profits between the Partners in a ratio defined by the number of representatives of each who had served on the Management Committee. Following agreement in 1997, the new Partnership Board set up IBC in its own offices at Aldwych House and recruited a full time staff to run operations. It is a strange coincidence that Aldwych House was also the setting for the inaugural meeting of the Society in 1945. We retained many of the IEE exhibitions group who had previously worked on IBC and supplemented them as required to provide exhibition planning and financial control.

Since 1998, IBC has grown significantly and now occupies the whole of the RAI Congress Centre in Amsterdam, some 56,000 square metres of exhibition space and 55,000+ attendees to the exhibition and conference in 2019. Unfortunately, COVID-19 prevented the 2020 physical exhibition which, as well as having a severe impact on Society income, focused peoples’ minds on virtual meetings and remote working.



Along with its partners, the IET, IEEE, SMPTE, RTS and IABM the Society continues to play an active role in the strategic management of IBC. In turn, IBC adds a dimension to the membership of the SCTE; technological advances increasingly mean a siloed approach to broadband, streaming and content delivery benefits nobody. The continued success, even through 9/11, has meant a steady income to the Society and has enabled the Executive Committee to provide benefits to members over and above that which would be possible from subscriptions alone. In addition, the Society is now well known and has a good reputation stretching across Europe and into new technology areas.

## Training

The Society's mission to maintain standards with our lecture programmes and journal goes back to 1945, but it was not until the early 1990s that we embarked on formal classroom training and certification, which were well produced and very successful; the range of courses expanded exponentially in line with the growth of the industry itself.

By the end of 1999 the SCTE Training Course for Service and Network Technicians was available. The three basic courses/modules continued over the years. Altogether we have issued 2960 certificates for Installation Technician, 1408 certificates for Service Technician and 450 certificates for Network Technician.

In July 2012 the Society launched a new company, Broadband Training Ltd (BTL), to provide qualified tutors and training facilities for the presentation of SCTE course material directly to students where no internal resource is available. In addition to the initial three training courses the Society was providing a range of courses and by 2020, had issued 121 Certificates for the Fibre Course, 82 for Network Architecture and Design, 87 for In-Home Networks, 5 for Coaxial RF Design, 60 for Business Data and 53 for the Wi-Fi course.

In 2020 an online Learning Management System (LMS) was launched at ANGA COM, managed by Philip Humphries. Tony Basham, SCTE President and Chair of the Training Committee said at the time, "There is no need to sit in a classroom to take our range of online courses and exams and these are available for students 24/7. After ordering the courses, one username gives access to all our courses and users are given immediate

feedback, through a chat function, on their knowledge levels as well as on their progress (reports can also be generated). Learning is interactive and done at the student's pace. SCTE certificates are also provided online to those who pass the exams."

It also became possible to translate the courses more easily into different languages. By the end of 2022, the number of students who passed the courses on the LMS platform were: 40 Service Technician, 38 Network Technician, 37 Network Architecture & Design, 225 Introduction to Fibre, 162 Introduction to DOCSIS 3.1 and 15 Understanding Wi-Fi Wireless. To celebrate the Society's 75th a special edition of the SCTE's Introduction to DOCSIS 3.1 LMS Course was made available to all SCTE members with free access.

In December 2022 James Harwood, the Chair of Training Committee presented some initial ideas on free training, a mentoring programme, the introduction of Human Skills training courses and expansion of the training offering for general development of students. This was recognised as a bold move and, whilst losing some training revenue, could result in earning the Society extra revenue in new members. The new initiative was announced to the press at ANGA in May 2023 and so far has been well received.

**Over 78 years the SCTE has demonstrated both a commitment to maintaining the technical standards across a rapidly changing industry and dedication to sharing knowledge through its various and varied initiatives. The hard work, agility and vision of the Society and its members have ensured that it has endured for this long. We look forward to the next 50 years with the same energy and drive that got us this far and have you, the members, to thank for our continued success.**

