





























THE FIRST FIFTY YEARS ELECTROSONIC

































With Great Pleasure and Pride, Electrosonic Presents a 50-Year Review

A multi-image company? A lighting control company? A 70mm film projection company? A videowall company? A products company? A systems company? A service company?

This review shows how Electrosonic developed over the years – changing business models, adapting to new technologies, staying continuously innovative.

Electrosonic has built on its remarkable heritage to become a world class audio-visual company offering design consulting, systems integration and an extensive range of services.



THE CASTLE, BURBANK, CA. ELECTROSONIC'S WORLD HEADQUARTERS.

HAWLEY MILL, DARTFORD, UK. ELECTROSONIC'S EMEA HEADQUARTERS.

The Beatles top US charts for the first time

Tokyo Olympic Games

James Bond film "Goldfinger" released

O1 NINETEEN-SIXTIES

HOW IT ALL BEGAN

1964

In the early 1960s, Robert Simpson ("Bob") worked for Recorded Sound Ltd near Marble Arch in London. The company had a sound recording studio, but Bob was the technical manager for other activities, especially providing sound and synchronized lighting control for exhibitions. Lacking resources, he advertised for an additional engineer. Michael Ray ("Mike") turned up on his motorcycle and convinced Bob that his needs would be better met by the combination of himself and his friend Denis Naisbitt working freelance. Both worked for Post Office Telephones (now British Telecom) and seemed to have plenty of time for this extra work. Their knowledge of electronics and switching systems was invaluable, and enabled Recorded Sound to complete several significant projects.

It was not long before the idea of setting up a separate business developed. Lynton Fletcher, the owner of Recorded Sound, was amenable to the idea, and Electrosonic Ltd was registered on the 3 March 1964. Much early work was done from the founders' respective homes, but once the company was registered, it obtained premises in Greenwich Vegetable Market (two unfurnished rooms above a potato stall). Robin Prater, ex-employee of Recorded Sound, joined the company as its first employee.

"Electrosonic Ltd was registered on the 3rd March 1964."



THE FOUNDERS: DENIS NAISBITT, MIKE RAY & BOB SIMPSON

TECHNOLOGY

Two significant technical developments in the first year were dimmers and programming equipment. Mike Ray developed an automatic electronic dimmer, based on Bob Simpson's suggestion that the recently invented Silicon Controlled Rectifier would be the ideal basis for such a device. Soon Electrosonic's dimmers were being used in big cinemas, and lighting control became a major business for Electrosonic. The photo shows a 60kW automatic dimmer.

An important project in 1964 was Electrosonic's first "Multi-Image" show using five American Kodak 550R Carousel projectors. This was for a prize winning exhibit designed by Theo Crosby for the British entry at the Milan Triennale. Denis Naisbitt built the "pin matrix" programmer, shown here, to provide complete flexibility for the cuing of the slide changes.









173 GREENWICH HIGH ROAD

1965

The two rooms in the market were soon augmented by a leaky shed behind a nearby motorcycle shop, but it was soon clear that both more space and more hands were needed. Peter Way, who had been a colleague of Mike's at the Post Office, joined the company as Employee No 2 in early 1965. The search for premises yielded a building near Greenwich Railway Station. In its better days, it had been a pub known as the "Prince Albert," but when found it was occupied by "rough sleepers." However, Electrosonic cleaned it up and moved in to 173 Greenwich High Road in the later part of 1965.

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PEOPLE







173 GREENWICH HIGH ROAD NO LONGER EXISTS; ITS REMAINS ARE UNDER THIS NOVOTEL. GREENWICH RAILWAY STATION IS IMMEDIATELY BEHIND IT. PEOPLE



ROBIN PRATER was Electrosonic's first employee. He specialized in audio equipment and later in AV programming. In the early 1970s, he set up his own business, Prater Audio Visual.

"It's a Small World" opens at Disneyland

England wins the FIFA World Cup

Ground breaking at the World Trade Center

O1 NINETEEN-SIXTIES

EARLY PROGRESS

1966

The three years spent at 173 Greenwich High Road were years of steady progress. More staff were taken on, and an investment was made in metal working machinery. Milestone projects in 1966/7 were those for Madame Tussauds and EXPO 67. The EXPO convinced Electrosonic that its future lay in working internationally.



THE DEATH OF NELSON ON THE ORLOP DECK.

ROCK OF GIBRALTAR

In 1966, Eddie Baglietto, working for the company that represented Philips in Gibraltar, came to Electrosonic with a problem. There were plans to floodlight the Rock, but the Airport insisted that it have the facility to switch off the lights when there were aircraft movements. Mike Ray developed a radio control system based on long range radio pagers (a technology which Bob Simpson had become familiar with at Recorded Sound).



TRAFALGAR AT TUSSAUDS

In 1966, Madame Tussauds commissioned Tim O'Brien to create a new attraction The Battle of Trafalgar – as it happened. He in turn called on Theatre Projects (founded by Richard Pilbrow in 1957) to provide the sound and lighting. Electrosonic, using its expertise in continuous sound replay, programming, and automatic dimmers, engineered the automatic show control system for Theatre Projects. It also built animated battle maps for the project. This would lead to other projects for Theatre Projects and a 23-year relationship with Madame Tussauds.



THE GUN DECK.

The Beatles release "Sqt Pepper's Lonely Hearts Club Band"

Six Day War in the Middle East

Concorde supersonic airliner launched

O1 NINETEEN-SIXTIES

1967

THE GYROTRON

The Gyrotron was Electrosonic's first ever experience of working on a "Dark Ride"; the company has since worked on many more. This one was in the entertainment park attached to EXPO 67. It was designed by Sean Kenny, who appointed David Collison of Theatre Projects to do the sound. David in turn asked Electrosonic to build and install the sound system. Huge loudspeakers had to be hauled up into the vast interior in the sub-zero Montreal winter.



THE GYROTRON WITH ITS MAIN PYRAMID STRUCTURE AND ACCOMPANYING "VOLCANO."



OPENING DAY AT THE GYROTRON. THE RIDE VEHICLES CAN BE SEEN CROSSING FROM THE "PYRAMID" TO THE "VOLCANO." PHOTO ROBIN PRATER.

EXPO 67 MONTREAL

EXPO 67 was Electrosonic's first EXPO – the company would go on to work at fourteen more of them over its 50 years. The major client here was the COI (Central Office of Information) responsible for the UK Pavilion for which Electrosonic provided AV and lighting control. One of the designers of the UK Pavilion exhibition was James Gardner whose section "Britain Today" was one of the most popular exhibits at the EXPO. Electrosonic was to work with James Gardner on many projects until his death in 1995.





BRITAIN IN THE WORLD BY MARIO ARMENGOL





LEFT: HANDSETS WITH PUSH BUTTON LANGUAGE SELECTION DEVELOPED BY ELECTROSONIC FOR "BRITAIN IN THE WORLD". RIGHT: "BRITAIN TODAY" EXHIBIT BY JAMES GARDNER. THE MINI HAD FALSE EYELASHES. PHOTO: ROBIN PRATER.



The film "2001: A Space Odyssey" is released

The Prague Spring starts in January, but is over by August

The musical "Hair" opens on Broadway

O1 NINETEEN-SIXTIES

1968

THE BEGINNING OF AV PRODUCTS

As a result of projects like EXPO 67 and the introduction of the Kodak Carousel SAV projector, a range of AV products was developed. Business expanded and the company again ran out of space. In late 1968, it moved to a 10,000 sq ft (930 sq m) factory at 47 Old Woolwich Road. The "Carouselvision" project for Kodak was a catalyst for export business.

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The move required more capital. ICFC (Industrial and Commercial Finance Corporation) took a 25% share in the company in return for debenture finance. The founders each retained a 25% share.

47 OLD WOOLWICH ROAD IS THE RED BUILDING WITH GREENWICH POWER STATION BEHIND. PHOTO TAKEN IN 2011.

MULTIPLEX Programming

Mike Ray developed a system based on time division multiplex which allowed the recording of many independent control signals on a single track of magnetic tape. It was to be the mainstay of Electrosonic's programming of mixed media and multi-image shows until the arrival of the personal computer.



COULD RECORD 16 INDEPENDENT SIGNALS ON A SINGLE TRACK OF TAPE.



COULD PROGRAM UP TO 120 INDEPENDENT FUNCTIONS.

PEOPLE



ROGER BEAURAIN joined Electrosonic in May 1968 as Chief Engineer, relieving the pressure on Mike Ray. He was to become the leader of developments in lighting control products. He retired from the company in 1995 at the time of completing the British Library project.

DISSOLVE UNITS

The principle of the "dissolve unit" was well known in the 19th Century; it ensures that there is a continuous image on the screen by cross fading (or switching) the lamps of two slide projectors. The combination of two Kodak Carousel automatic slide projectors and an electronic dissolve unit synchronized to a soundtrack produced a "film like" presentation. Electrosonic's first dissolve units were produced in three variants; a "snap change" unit giving instant picture change, a "two speed dissolve" unit giving a choice of two preset dissolves, and a "snap dissolve" unit that gave both options.



THE FIRST DISSOLVE UNITS WERE QUITE BIG. HERE EIGHT SNAP CHANGE UNITS ARE INSTALLED AT THE ITA TELEVISION GALLERY. PHOTO: ROBIN PRATER.



ITA TELEVISION GALLERY

This was a permanent exhibition, designed by James Gardner, in Brompton Road, London, which promoted the Independent Television Authority, and showed how programs were made. But it was built before the advent of low cost video recorders or discs. So this exhibit describing how "News at Ten" was produced, which looks like a "videowall", was actually presented by slide projection – see adjacent item "Dissolve Units".

CAROUSELVISION

One of the most significant events in Electrosonic's history was the engineering of the Kodak show at Photokina 1968 in Cologne. This was an "in the round" show with 20 screens, each served by two Carousel projectors and an Electrosonic "snap dissolve" unit. The show was produced by René Groebli with music by Boris Jojic. It was a big success and led directly to new business for Electrosonic. The show itself toured Germany in 1969, and even turned up in London at the Ideal Home Exhibition.





Maiden flight of the Boeing 747

Apollo 11 moon landing in July

"Monty Python's Flying Circus" starts on BBC1

O1 NINETEEN-SIXTIES

1969



PEOPLE



TONY CLYNICK was recruited in 1969 during which time he helped with the Germany tour of Carouselvision and prepared equipment for EXPO 70. He spent most of 1970 in Japan at the EXPO. On his return, he resumed a career as project engineer, but left the UK in 1975 for the Far East where, based in Singapore, he became Electrosonic's "Far East Technical Representative" for ten years.

PEOPLE



JOHN LILLICRAP was at university with Tony Clynick and joined Electrosonic at the same time. At first an engineer in the UK, most of John's 30-year career with Electrosonic was in the USA. Here he made a fundamental contribution to the successful start-up of Electrosonic Systems Inc., and went on to fulfill many roles within the company.

HEROES - LIVE

A major project at Madame Tussauds was Heroes - Live featuring a number of contemporary heroes, each brought to life in sequence with a 30 second sound and light show. The creative team again included Theatre Projects with Electrosonic doing the show engineering. Shortly after the successful moon landing, Armstrong and Aldrin were in "Heroes." The images in their helmet visors were achieved by long throw back projection.

LIGHTING CONTROL

By 1969, lighting control had become a significant business. The original ES1006 dimmers had been joined by the ES1093 modular plug in automatic dimmers. This construction was much preferred by commercial customers because of the ease of maintenance. The racks of dimmers shown here were exported to ASEA in Sweden.





The start of UNIX time (on January 1)

First New York City Marathon

Death of Charles de Gaulle

O2 NINETEEN-SEVENTIES

1970

THE START OF EXPORTS

Exports had started to be important to Electrosonic in the 1960s, but the recognition of the "slide/sound" or "multi-image" medium completely changed the scale of the business. The first regular export customer was AB Ljusteknik in Sweden, run by Göte Ljungberg, who, in the 1960s, had started buying Electrosonic's dimmer products. Initially reluctant to get involved with AV, it was not long before the company became Ljus & AV Teknik.

As a result of some reciprocal business for EXPO 70, Ganz & Co of Zurich became a customer and later, as AV Ganz, a very important outlet for AV presentation products. Carillon Films in Holland, Sum Films in Spain, Jorgen Castenschiold in Denmark, and several others had all started regular business by 1970.







THOMAS GANZ OF AV GANZ.

"THE BRITISH SCENE" A BIG MULTI-IMAGE SHOW PRODUCED BY JOHN HEDGECOE FOR THE UK PAVILION.

ES2000 DISSOLVE UNITS

In time for EXPO 70 Electrosonic developed a new generation of dissolve units; smaller and smarter than their predecessors. The earlier products were based on relay logic, but the ES2000 series were the first Electrosonic products to use the newly introduced integrated circuits. These "chips" were not powerful, containing at best a handful of logic gates.



THE ES2002 DISSOLVE UNIT. PHOTO: ROBIN PRATER.

EXPO 70

This EXPO, in Osaka, Japan, was determined to be the biggest ever; it was and remained so until 40 years later. Electrosonic had many AV installations in the UK Pavilion, but its largest effort was an 80 projector show in the Scandinavian Pavilion. The Ireland Pavilion had an attractive show produced by Peter Paul. Electrosonic equipment was installed in 13 pavilions in all.



THE UK PAVILION AT EXPO 70.



Introduction of decimal currency in the UK

Walt Disney World opens in Orlando, FL

Intel introduces the first microprocessor, the 4004

000 020

02 NINETEEN-SEVENTIES

PEOPLE



SIMON BEER, Professor Stafford Beer's son, joined Electrosonic at the time of the Cybersyn project. In the 1970s he worked all over the world for Electrosonic. The photo shows him in a suit about to meet the Shah of Iran. He went on to found Integrated Circles Ltd.

R CORDEN

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THE CYBERSYN OPERATIONS ROOM. IMAGE SELECTION FROM EACH CHAIR.

STAFFORD BEER & THE CYBERSYN PROJECT

Professor Stafford Beer was an expert in Cybernetics and Operational Research. By complete coincidence Bob Simpson had worked in his department at the United Steel Companies before going to University; but chance led Stafford to Electrosonic in 1970-71. He needed a massive system of random access slide projectors for use in his Cybersyn project being developed for the Chilean Production Development Corporation.

The project centered round an Operations Room which worked in exactly the same way as today's "collaboration rooms." It was way ahead of its time. The special projection system was developed during 1971, delivered in 1972, and became operational in 1973 just before Allende was deposed and the project abandoned.

Eo All Eo Whom These Presents Shall Come, Screeting:

CERTIFICATE OF INCORPORATION OF ELECTROSONIC SYSTEMS INC. USA



Atari releases the arcade version of "Pong"

Last manned mission to the moon of the 20th Century (Apollo 17)

The Airbus A300 flies for the first time

O2 NINETEEN-SEVENTIES

1972

THE FIRST SUBSIDIARIES

In early 1972, Electrosonic set up its first overseas subsidiary. This was Electrosonic GmbH in Düsseldorf in what was still West Germany. The office premises were initially shared with Roundel Productions, a London-based AV production company which also saw Germany as a potential market.

The first manager of Electrosonic GmbH was Hans Dieter Jedam, but he left after a couple of years to move to the Stuttgart area where he both got married and set up his own business. Johannes ("John") Brühl, who had previously worked for Kodak Germany, then came in as manager, a job he was to retain until his retirement. For its first few years Electrosonic GmbH's work was entirely devoted to the sale and rental of multi-image AV equipment.

In 1970, Electrosonic had developed a relationship with Empire Photosound Inc of Minneapolis. Its hardware offshoot, Photosound Systems, became a dealer for Electrosonic's multiimage products. However in 1972, Empire Photosound became part of a larger group and the new owners did not want to continue with the hardware business, and offered the small unit to Electrosonic. Thus Electrosonic Systems Inc was founded in November 1972. Art Nicol, inherited from Photosound, was the first manager.



815 WOOLWICH ROAD. ELECTROSONIC'S HEADQUARTERS FOR 18 YEARS

815 WOOLWICH ROAD

In 1972, it was time to move again. The premises at Old Woolwich Road had become inadequate for the scale of the business. In nearby Charlton, the huge AEI telephone works had closed in 1968, and the site included a big building at 815 Woolwich Road, which had been built as the company canteen in the 1950s. From late 1972, this became Electrosonic's headquarters for 18 years.



EMPIRE PHOTOSOUND USED ELECTROSONIC MULTI-IMAGE EQUIPMENT FOR ITS CUSTOMERS' CONFERENCES. THIS ONE WAS FOR CONTROL DATA.

PEOPLE



JOHANNES BRÜHL did not join Electrosonic GmbH until late 1974, but he successfully ran the company until his retirement, and the company's merger with Helvar GmbH in 1996/7.

United Kingdom joins the EEC

Pink Floyd's "Dark Side of the Moon" released

Opening of the Sydney Opera House

O2 NINETEEN-SEVENTIES

1973

AIR RAID SHELTERS

815 Woolwich Road was built on top of a large air raid shelter complex built in 1939. It consisted of a wide corridor running the length of the building with a series of "cells" on either side. Electrosonic was able to convert the cells on one side into recording studios, preview theaters and space for other support services. The corridor was lit by ultra-violet light and was reminiscent of a branch office of the KGB.



PEOPLE

THE 200FT (60M) LONG BLACK CORRIDOR.

COEN MARGADANT worked for Philips before moving to Carillon Films in 1969 where he supervised the technical aspects of big multi-image shows. He became manager of Electrosonic Systems BV on its formation.

THE PRESENTATION UNIT

Electrosonic's AV products were now evolving. It was realized that for single screen applications, customers needed a "package" which combined projector control with audio replay. The first efforts were somewhat clumsy, but were soon to be refined.

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THE ES2601 PRESENTATION UNIT COMBINED AN ES2001 DISSOLVE UNIT WITH A TAPE CASSETTE PLAYER.

ELECTROSONIC SYSTEMS BV

Carillon Films of Holland was one of Electrosonic's earliest AV distributors, but, exactly as had happened in the USA, it decided that hardware sales were not what it wanted to do. So Electrosonic took over Carillon's AV hardware business and set up Electrosonic Systems BV. It started in Amsterdam-Oost, but soon moved to 33 Dubbelmondehof in the suburb of Osdorp. Coen Margadant and Ton Stoelinga were amongst the staff that transferred to Electrosonic.



THE AIR RAID SHELTERS HOUSED MANY FACILITIES INCLUDING THIS RECORDING STUDIO. RICHARD GROGAN, WHO WORKED ON MANY IMPORTANT PROJECTS IN THE 1970S, AT THE CONTROLS.



Muhammad Ali knocks out George Foreman in the "Rumble in the Jungle"

Richard Nixon resigns as President of the USA

ABBA wins Eurovision Song Contest with "Waterloo"

PEOPLE

O2 NINETEEN-SEVENTIES

1974

TENTH ANNNIVERSARY

By 1974 Electrosonic employed 140 people, 15 of them outside the UK. Exports were growing and in the spring of 1974, an international distributor meeting was held at the newly fitted-out 815 Woolwich Road. It featured two "house shows" that both presented Electrosonic and demonstrated the performance of its multi-image systems. One was produced by Robin Prater and the other by Malcolm Lewis.



MULTI-CHANNEL Lighting control

In this period, Electrosonic introduced a number of multichannel lighting control products for performance applications, including the ES6000 series based on sixchannel units.



IAN SIMPSON joined Electrosonic in 1974 as the company's first Finance Director, having previously held a similar post in an industrial holding company. In 1980, he became Managing Director of Electrosonic. He left the company in 1992 following the change in ownership.

PEOPLE



DAVID KERR joined Electrosonic in 1974 as a lighting sales engineer. He progressed to lighting sales manager and ultimately sales director, leaving ultimately sales director, leaving the company in 1993. His major contribution was to establish good connections with key clients, which led to excellent feedback as to what was really needed in the field.

EXPO 74

This EXPO was in Spokane, WA. By now Electrosonic Systems Inc could give good support to such events. The Australian Pavilion had a 36-screen multi-image show by Lindsay Rodda. The Taiwan Pavilion featured "The Taiwan Experience," a 28-projector wide screen presentation with 35mm movie made by Gregor Greig that used Electrosonic's latest ES2005 dissolve units. This show led to an introduction to the SCARS team of Prague which became a long term customer of Electrosonic.



THE TAIWAN EXPERIENCE AT EXPO 74.



Bill Gates and Paul Allen found Microsoft

Vietnam War ends

Margaret Thatcher becomes leader of the Conservative Party in the UK

O2 NINETEEN-SEVENTIES

1975

MULTIVISION Electrosonic LTD (canada)

This company was set up in 1975 by Douglas Elphick. It would go on to have a 25 year history in Toronto in several different locations. Initially Electrosonic Ltd had a 20% share of the business, but this later rose to a majority holding. The company carried out many important corporate installations, in addition to selling Electrosonic's multi-media products.

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PRESENTATION UNITS

Electrosonic introduced a new ES3000 series of dissolve units and related products. The most significant was the ES3601 "Presentation Unit" which at last represented a neat and practical method of presenting single screen slide-sound shows. The ES3601 offered snap and dissolve slide changes based on impulse programming (1kHz and 150Hz pulses on a control track). The related ES3609 presentation unit used a continuous FM control signal to give any required dissolve speed.



MULTIWAY LIGHTING CONSOLES

By now Electrosonic was doing more business in the theater lighting market and had introduced its MULTIWAY consoles for the control of between 36 and 120 channels. They featured dipless crossfade and comprehensive grouping facilities.





DOUGLAS ELPHICK IN FRONT OF THE WELLINGTON STREET WEST OFFICES OF MULTIVISION ELECTROSONIC.

PEOPLE



PETER SMITH joined Electrosonic from the EVR Partnership in 1975 as a development engineer. He started by developing slide based AV control products, and then the company's first solid state sound stores in 1985. He is best known for his development of videowall image processors. He was appointed a director of Electrosonic Ltd in 1993. He left the company in 2010 when the products division was sold to Extron Electronics where he is now Research Director.



First commercial flight of Concorde

Apple Computer Company is formed by Steve Jobs and Steve Wozniak

The CN Tower completed in Toronto

O2 NINETEEN-SEVENTIES

1976

SCARS AND IRAN

The team SCARS (SCience ARt Sense) from Prague became a major customer of Electrosonic in the period 1976 – 1990. Led by Jaroslav Fric and Jaromir Smejc, it undertook major multimedia manifestations around the world. However to circumvent the practical restrictions arising from the still Communist regime in Czechoslovakia, SCARS needed a "western" partner to access equipment and to provide after sales service.

2 76

The first, and biggest, project was for the Museum of the Sixth Bahman, an underground museum next to the Shahyad Monument (later the Azadi Tower) in Tehran. Electrosonic's installation consisted of twelve mirror clad moving columns containing a total of 112 slide projectors and 56 dissolve units, four 35mm movie projectors , 60 channels of lighting control and a multi-channel sound system. An Electrosonic multiplex programming system kept everything in sync. The system was built in 1976, but actually opened in early 1977.



THE SUSPENDED SCREEN COLUMNS WERE MIRROR CLAD.



THE SHAHYAD MONUMENT.

ROCKBOARD

In the 1970s, Electrosonic supplied many custom built lighting consoles to the emerging music touring market. Users were to include The Who, The Rolling Stones, Deep Purple, Genesis, Pink Floyd and many others. Based on input from touring specialists, including Graham Fleming of Britannia Row, Bob See of Seefactor and concert lighting designer James Moody, the specification of a "standard product" was developed. This was ROCKBOARD.



A 48-CHANNEL ROCKBOARD WITH TOUCH MATRIX

MICROPROCESSORS

In 1976, Electrosonic became Intel's third UK customer for its 4040 microprocessor which was used in a new single projector controller. This was the ES3003 "Multivision Processor" developed by Mike Ray. Up to 28 units could be connected in a "ring."







Centre Georges Pompidou opens in Paris

The film "Star Wars" opens

Death of Elvis Presley

O2 NINETEEN-SEVENTIES

1977

PEOPLE



In the 1970s Electrosonic completed many audio installations for theaters and other auditoria, usually based on its own audio mixer products, and often requiring a lot of custom built items such as stage management controls. A typical example from this era was the Mold Arts Centre, shown here, where both main and studio theaters were equipped by Electrosonic to the specifications of consultants Carr & Angier.



ELECTROSONIC - THE FIRST 50 YEARS

PEOPLE



KEVIN CURRY was a marketing manager at 3M before joining Eletrosonic Systems Inc in Minneapolis in 1977.

Arthur Nicol had left Electrosonic in 1976, and for a short time the office was managed by a triumvirate consisting of John Lillicrap, Willard Plumb (salesman) and Sue Banks (later Hobbs) who was over from the UK on an exchange arrangement. Headhunters located Kevin who took up the post of President of Electrosonic Systems Inc in early 1977.

When Kevin arrived, the USA represented only 5% of Electrosonic's turnover. By 1997, when he stood down as President, it represented 70%. After 1997, he continued in a business development role before retiring in 2002.



ES6090 DIMMERS

Architectural lighting control products were always the most important part of Electrosonic's lighting business. In 1977, a completely new range, the ES6090 series, was introduced which was an immediate success. All dimmers were plug in, were available in automatic or manual versions, and were suitable for both incandescent and fluorescent lamp loads.

MICROCUE

The Electrosonic multiplex encoders stood the company in good stead as multi-media programming devices for many years, but were slow to use and by 1977, it was expected that a better solution would be available.

Electrosonic's first microprocessor based programmer was MICROCUE, intended primarily as a means of programming ES3003 based multi-image systems.

SHOW RANGE

It was time to smarten up the small unit AV products. 1977 saw the introduction of the "SHOW" range. SHOWPULSE was a two speed dissolve unit with pulse synchronization, SHOWSLIDE was a variable speed dissolve unit with FM synchronization and SHOWTAPE was a combined AV cassette recorder with FM dissolve unit.



ES6090 WALL MOUNTING



ES3056 MICROCUE PROGRAMMER



SHOWTAPE

THE LONDON EXPERIENCE

In the 1970s and 80s, Electrosonic equipped a number of "Experience" shows based on multi-image technique, usually augmented by 35mm film or special effects or both. These were all designed as tourist attractions. The 1977 opening of The London Experience was particularly significant as it was the first major installation using the ES3003 system. The show was in the Trocadero basement in Piccadilly Circus, a site owned by Electricity Supply Nominees who wanted to boost the Trocadero as a tourist destination. It was nominally produced by Bernard Delfont, but was actually produced by Caribiner Inc of New York.





O2 NINETEEN-SEVENTIES

ELECTROSONIC FRANCE

One of the major contributors to Electrosonic's export success was France. Jean-Claude Bargain had set up his company Technitone in Paris in 1973, and it immediately became Electrosonic's AV products distributor. By 1978, it was the biggest buyer of FM dissolve units, and later would become the biggest outlet for Electrosonic's computer based multi-image systems. By agreement, it changed its name to Electrosonic Systèmes, although Electrosonic never had shares in the company.



JEAN-CLAUDE BARGAIN. PHOTO FROM 1989.



EXPORT AWARD

In 1978, Electrosonic Ltd won the Queen's Award for Export Achievement. This is a difficult award to win as it requires showing a sustained increase in exports over a period of at least three years. But by 1978 Electrosonic deserved it; direct exports from the UK were running at 45% of turnover.

PEOPLE



ANDREW KIDD joined Electrosonic in Woolwich in 1978 as a test engineer. He rapidly progressed to being a project manager before moving to Electrosonic Systems Inc in Minneapolis. Apart from a break in 1992 to acquire an MBA, he has lived in the USA ever since, both in Minneapolis and New Jersey. He has held several management posts, but since 2005 has been responsible for business development in the museum and visitor center market.



JAMES GARDNER

James Gardner was a, if not the, leading exhibition designer of the post-war era. Electrosonic was privileged to work with him on many projects in the period 1964 until his death in 1995. He designed the entire exhibition galleries of the Nahum Goldman Museum of the Jewish Diaspora (Beth Hatefutsoth) which opened in Tel Aviv in May 1978. This relied heavily on AV techniques augmented with programmed lighting and sound sequences. Electrosonic delivered the systems, based mainly on standard products.

FLOATING BACK PROJECTED IMAGES AT BETH HATEFUTSOTH.



Ayatollah Khomenie seizes power in Iran

Philips publicly demonstrates the Compact Disc (CD) for the first time

The Sony Walkman is introduced in Japan

O2 NINETEEN-SEVENTIES

1979

RUNNING OUT OF SPACE

79

Electrosonic was running out of space at 815, and production staff were becoming difficult to recruit. A new company, Electrocue Ltd, was set up to be the products manufacturing arm, and a pilot line was opened in Maidstone some 35 miles away in the middle of Kent. At the same time the Development department was moved to premises in Swanley where it stayed for the period June 1979 – February 1982. Here its main task was to develop the ES4000 series of computer controlled multi-media equipment.



THE DEVELOPMENT LABORATORY MOVED TO THE FIRST FLOOR OF THIS BUILDING IN SWANLEY IN 1979.



"MIRACLES & MADNESS" AT NIAGARA FALLS.

NIAGARA FALLS

A big "Experience" show was installed at Niagara Falls in 1979. It was engineered by Electrosonic using its ES3000 system programmed by MICROCUE. It used 60 projectors on a 3:5:7 screen format, with each screen a 10ft (3m) square. The format matched the high auditorium space. The show was produced by Caribiner Inc of New York.



YVONNE HEGARTY joined Electrosonic in 1979 as a Marketing Assistant, but within a short time she became Marketing Manager, a post she held until her retirement in 2005.

Her role encompassed the whole range of marketing activities from exhibitions to the production of sales literature. She excelled in supporting overseas distributors, especially when organizing the celebrated Electrosonic International Distributor meetings.

PEOPLE



BOB STINTON came to Electrosonic in 1979 from Rediffusion Industrial Services, having trained at the BBC and Granada TV. He joined at a time when the company was very products-oriented but needed a strong project engineering capability to meet customer needs. When he arrived, only half a dozen people worked full time on projects, but by the time he left the team had grown to 70 people.

In 1981, he was appointed Engineering Director with a remit that eventually covered all engineering activities in the company.



The Pac-Man arcade game is released in Japan

DEC, Intel and Xerox introduce the DIX standard for Ethernet. First outside Xerox and first to support 10Mb/s

Ronald Reagan elected President of the USA

O3 NINETEEN-EIGHTIES

ELECTROCUE GOES INTO PRODUCTION

The setting up of Electrocue Ltd arose not only from space problems at Woolwich Road, but also the realization that the manufacture of electronic products could not be done effectively in the same environment as systems engineering.

Electrocue was set up to be a contract manufacturer, intended to build products for outside customers as well as Electrosonic. The reasoning was that if it could be an effective manufacturer on the open market, then Electrosonic could be reasonably sure it was getting products built at a sensible price. A new factory was built in Coldred Road on the Parkwood Industrial Estate. Denis Naisbitt was responsible for the fit-out, and soon Peter Way moved down to Maidstone as Managing Director of Electrocue.

During the 1980s Electrocue expanded greatly with an increasing proportion of business for outside customers. It later acquired additional premises in the form of the neighboring Fairfax building. This gave much more production space which could easily be arranged to suit the requirements of particular products.

By 1993 it was clear that contract manufacturing was becoming unprofitable, so this activity ceased. Electrosonic's products were also changing and needed different resources, so Helvar took over Electrocue which continued to manufacture Helvar lighting products until 2001 when manufacturing ceased in Maidstone.



THE FAIRFAX BUILDING OF ELECTROCUE.



MAIN PRODUCTION AREA IN THE FAIRFAX BUILDING.





ELECTROCUE AT COLDRED ROAD.

HOLLAND HAPPENING

Electrosonic Systems BV installed a tourist "experience" show in Amsterdam called "Holland Happening." It used 42 projectors on a 15m wide screen. The slides used the "soft edge masking" technique to produce a seamless image. The show ran perfectly, but did not attract big audiences and was later moved to the Flevohof theme park.





THE 5.5M WIDE SCREEN WITH MOTORIZED MASKING AND CURTAINS AT THE CBI.

ELECTROSONIC WORLD

1980 was the first year that the ELECTROSONIC WORLD publication appeared. It has appeared ever since at two year intervals and has provided a unique record of Electrosonic's work. For the first 15 issues it was in a newspaper format, but from 2011 it changed to a magazine format.



PEOPLE



VERNON BASSETT was one of several long serving staff who joined the company around 1980. Vernon arrived as a 16 year old apprentice, doing everything from woodwork to coil winding. His life changed when Des Moriarty, Electrosonic's installation manager for many years, asked Vernon to join his team in 1986. Vernon was promoted to installation manager in 2004, having learned his trade on projects in Japan, Taiwan, Italy, and Scotland - not to mention Hull and Sheffield.

CORPORATE SYSTEMS

Electrosonic has completed corporate AV installations since the 1960s. Unfortunately photographic records are sparse because, particularly in recent times, many clients are reluctant to allow photography. A state-of-the-art installation in 1980 was for the Council Chamber of the Confederation of British Industry (CBI) at Centre Point in London. Notable was its use of multiple audio zones with time delay. Visual support was by 16mm film and slides

PEOPLE



DAN LASPA joined Multivision Electrosonic in Toronto in 1980 as a rental and staging technician. By 1986, he had become manager of the Systems Projects department. In 1990, he had a spell at Electrosonic in the UK at the time of the move from Woolwich to Dartford, later followed by work at EXPO 92 and, for the USA office, work at EXPO 93. In 1996, Dan was summoned to Burbank to project manage the first Newseum project. He has been there ever since working on many high profile projects. Dan is highly regarded by both clients and colleagues.



TGV high speed train service between Paris and Lyon commences

First Space Shuttle mission

O3 NINETEEN-EIGHTIES

1981

THE ES4000 SYSTEM

PEOPLE



RICK SOULE joined Electrosonic in Minneapolis in January 1981 and spent nearly 30 years with the company. He was project engineer on many key projects including those at EPCOT and EXPOs 84, 86 and 88. His big contribution came with the arrival of the videowall where he was involved not only with major projects, but also with product development including PICBOX and AUTOCOLOR. Rick left to join Extron Electronics in 2010 following the sale of the products business

PEOPLE



THE FIRST ES4000 PRODUCT

WAS CALLED THE "SONIC," HERE PROMOTED WITH THE

BELL & HOWELL VERSION OF THE APPLE II.

A new range of unit AV products with an astronomy theme was introduced in 1981. The first two products were ECLIPSE, a compact dissolve unit that offered both impulse and FM synchronization to sound, and GEMINI, which replaced the previous SHOWTAPE.

THE ES4003 BECAME THE

STANDARD MULTI-IMAGE

CONTROLLER.



THE ECLIPSE DISSOLVE UNIT



THE GEMINI PRESENTATION UNIT



TONY PETRUZZIELLO joined Multivision Electrosonic in Toronto in July 1981. Starting as a bench technician and installer, he soon added custom engineering to his repertoire and was involved with many MEL installations in the 80s and early 90s. As the MEL business was absorbed into the North American operations of Electrosonic, system design became his main job. He has supported the Ralph Appelbaum practice over a period of 20 years.



By the late 70s serious competition had emerged in the multi-image equipment business. At the same time, the personal computer had arrived. A fast track

development program, carried out at the Swanley laboratory, resulted in a completely new multimedia programming system, initially based on using the Apple II computer as the means of programming. The products were launched in 1981 and were an

immediate success. The first products arrived in the USA because of a tie-up with



THE COMPUTER PROGRAM WAS CALLED ESCLAMP.



The first CDs go on sale in Germany

The Thames Barrier is first publicly demonstrated

O3 NINETEEN-EIGHTIES

THE PROTOTYPE FOUNTAIN BARGE. THE FINAL BARGE HAD A ROOF AT THE BACK TO WHICH ALL THE MORTAR TUBES WERE WELDED.

CARNIVAL DE LUMIÈRE AT EPCOT

1982

Walt Disney's EPCOT opened in Orlando, FL in October 1982. It had a night time show on the lagoon, which was based on nine self-propelled barges which came out onto the lagoon under the cover of darkness. Five of the barges were "AV," each with four 20ft (6m) rear projection screens; four were combined "firework and fountain" barges, each with 72kW of color lighting, 28 fountain jets and 24 firework circuits. The entire control system was engineered by Electrosonic. Synchronization was based on the use of Electrosonic Time Code transmitted by radio.



REAR VIEW OF THE AV BARGES. THE GRAY BOXES ARE THE SLIDE PROJECTOR HOUSINGS SUPPLIED BY ELECTROSONIC.

APOLLO

The major AV product introduction in 1982 was APOLLO. This presentation unit could run shows using the impulse and FM standards, but could also control three projectors using the new SYSTEM 4000 ALPHASYNC signal. It had a fully automatic cassette tape deck from Papst which meant that it could also be used for continuous and "autopresent" shows.







ALC: NOT



THEATER SOUND SYSTEMS

In the 1970s and 1980s, Electrosonic installed sound and communication systems in many theaters, mainly in the UK but also in Holland, Norway and the Middle East. Early examples included the Churchill Theatre

Bromley and the Shaw Theatre in London. Most work was done to consultant's specifications, although some projects like Inforama in Norway were "design and build." In 1982, Electrosonic provided both lighting and sound control for three theaters in the Middle East. The factory test of elements of one of the systems is shown in the photos.





Lotus 1-2-3 released for IBM personal computers

IBM releases the PC-XT

President Reagan announces that the Global Positioning System (GPS) will be made available for civilian use

O3 NINETEEN-EIGHTIES

1983

UNDERSEA FANTASY

This was a show written and produced by Ken McCabe of Sea World, with Robert Kirchgessner as technical consultant. It opened at Sea World Orlando in 1983 and ran for several years, sometimes as often as 16 times a day. Lighting, sound, animation control and projection were all engineered by Electrosonic who co-opted David Hersey as member of its team to ensure the best possible lighting design.



THE SET OF "UNDERSEA FANTASY" WITH BACK PROJECTED IMAGES.

PEOPLE



GRAHAM BAKER joined Electrosonic as a technician in the product development group in 1983. In 1988, he became a design engineer and in 1997, he took on the role of technical product manager.

Graham was involved with the development of a roll call of Electrosonic's key products: APOLLO from the slide era, PICBLOC-256 and PICBLOC-3 from the early videowall product, to VN-QUANTUM and VN-MATRIX in the latest image processing range. He left Electrosonic to join Extron Electronics when the products division was sold in 2010.

MULTI-SCREEN VIDEO

1983 marked Electrosonic's entry into the field of special video engineering. Not surprisingly, the first project was for a multi-screen video installation. This was produced by the COI and the Moving Picture Company for the UK Department of Energy and was used at international oil trade shows in Aberdeen, Stavanger, Houston and Halifax (Canada). The five screen system used JVC U-Matic machines which had the necessary servo control to keep them running in frame sync. Mike Ray developed a special controller for this application, which in a modified form went on to be used in many installations for LaserDisc control.



THE FIVE SCREEN MULTI-VIDEO DISPLAY ON NORTH SEA OIL.





The Apple Macintosh computer is launched

The Bell Telephone system in the USA is broken up

Elton John plays the Night and Day concert in Wembley Stadium

PEOPLE

PEOPLE

O3 NINETEEN-EIGHTIES

SOME OF THE VIDEO DISPLAYS (ALL CRT) AT THE GUINNESS WORLD OF RECORDS.

GUINNESS WORLD OF RECORDS

This exhibition, designed by Robin Wade, opened at the Trocadero in London. It was one of the first exhibitions to make extensive use of video, but at the time this had to be achieved using U-matic videotapes. The "Sporting Records" display was one of Electrosonic's first computer interactive exhibits, based on Apple IIe computers. Three terminals shared a 6MB hard disc drive.



PAUL TAYLOR started his career at Electrosonic with a sales order processing job in 1984. He soon moved in to a sales support role working alongside David Nuttall, Ashley Goddard and David Andrewarthur, eventually supporting Kevin Murphy. He later became a "leisure" sales consultant himself, and in 2012 he was appointed manager of the UK leisure sales team.



CHRIS OSTLER joined Electrosonic in 1984 having served an apprenticeship at Marconi Elliott Avionics. Starting as a junior project engineer, he rapidly moved to engineering his own projects, which went on to include some of Electrosonic's largest and most complex projects including the 850 monitor videowall at EXPO 92. He is now Chief Engineer in the UK.

DIGIDIM

A big step forward was taken in 1984 with the introduction of the DIGIDIM range of architectural lighting control equipment. Besides further improvements in mounting and serviceability, the big advance was the use of microprocessors to provide a comprehensive "scene setting" facility. Previously, such systems used ranks of potentiometers to set lighting levels for each scene. The new SCENESET controller could store 128 different lighting scenes, each storing a different lighting level for up to 32 dimmers. Units could be ganged together so a single system could control 512 dimmer channels.



A DIGIRAK HOLDING SIX DIGIDIM MODULES. A SCENESET UNIT IS AT THE TOP. THE LARGEST STANDARD RACK ACCEPTED 24 DIGIDIM MODULES.



THE SCENEMAKER WAS USED TO PROGRAM DIGIDIM SYSTEMS.

CORPORATE PROJECTS

Electrosonic has always been involved with corporate projects, and activity was great in the 1980s in the UK, in the Minneapolis area of the USA, in Holland and in Canada. Noteworthy installations in 1984 included British Aerospace in the UK, Lutheran Brotherhood Insurance in Minneapolis and Bell Canada in Toronto.



THE PHOTO SHOWS THE CUSTOM CONTROL PANEL, APPLE IIE PROGRAMMING, AND WIDESCREEN PRESENTATION AT BELL CANADA.

EXPO 84

EXPO 84 was in New Orleans. Electrosonic had installations in six pavilions. While multi-image was still important, this EXPO saw Electrosonic supporting several shows using automatic 35mm film systems. The most complex show was in the EEC Pavilion which used three 35mm movie projectors, 24 slide projectors and a 360° projection system called "Rondovision." This part of the system and the show production were by SCARS of Prague.



SECTION THROUGH THE EEC PAVILION AT EXPO84 SHOWING THE RONDOVISION PRINCIPLE BASED ON ANNULAR IMAGES "SPREAD" BY A CONCAVE MIRROR.

ELECTROSONIC - THE FIRST 50 YEARS



The Internet's Domain Name System is inaugurated

Back to the Future is the highest grossing film in the USA in 1985

Microsoft releases Windows 1.0

O3 NINETEEN-EIGHTIES

1985



LONDON EXPERIENCE MARK II

The original London Experience in the Trocadero was closed after a few years because the developers wanted to relocate it in another part of the building. In any event this did not happen until 1985. In the new installation, Electrosonic was responsible for the complete show including all building and fitting out work. The show itself was a completely updated version, again by Caribiner.



SOUND STORES

By 1985, it became practical to store short sound tracks in solid state memory. Electrosonic developed its first "sound store" in 1985 for the "Wheels" dark ride at the National Motor Museum in Beaulieu, UK. Based on the use of 56kB EPROMS, the system was a great success; the original installation remained unchanged, with the original recordings, for 21 years.

EACH "POD" ON THE "WHEELS" RIDE RECEIVED A SEPARATE COMMENTARY FROM DIGITAL SOUND STORES. THE SIGNALS WERE DELIVERED AT 100V BY PICK-UP RAILS.



THE VIDEOWALL IN THE BULGARIA PAVILION USED NINE LASERDISC PLAYERS, EACH PLAYING A SECTION OF THE OVERALL IMAGE.

EXPO 85

This EXPO was in Tsukuba, Japan. Several pavilions installed Electrosonic multi-media equipment, including the Sweden Pavilion with an elaborate show installed by Ljus & AV Teknik using 51 projectors and programmed automatic carwash brushes. Most significant for Electrosonic was its first extensive use of LaserDisc video in the UK and Bulgaria Pavilions.

PEOPLE



MARIS ENSING joined Electrosonic in 1985 as software development manager. His time with Electrosonic was relatively short, but his influence was considerable. He arrived as the company moved from using the APPLE IIe to the IBM PC as a programming platform. His most significant contribution was managing the introduction of C-THROUGH for videowall programming. He worked on the ANCOR program for animatronic control, and on the EuroDisney parade project. He is now based in southern California with his own company Mad Systems.



THE "MEDICINE" EXHIBIT IN THE UK PAVILION. EXHIBIT DESIGN BY NEAL POTTER FOR THE COI. VIDEO SCREENS SOURCED BY LASERDISC.



The Phantom of the Opera opens in London

Microsoft's initial public offering

Official opening of the M25 motorway around London

O3 NINETEEN-EIGHTIES

1986



Corporate installations continued as an important part of the mix in the 1980s, and fostered the development of specialist control equipment like Electrosonic's PRC (Presentation Room Controller). Electrosonic Systems BV in Holland completed many high profile installations including that for De Lage Landen in 1986 shown here. While video was coming in, high quality presentations depended on slides.



VIDEOWALLS

It was not surprising that Electrosonic saw the videowall as a natural progression from the multi-image slide medium. The problem was finding an economic and practical method of realizing it. First efforts used multiple LaserDiscs (as at EXPO 85) and the biggest manifestation of this technique was an installation in the Living Seas Pavilion at EPCOT in Orlando, FL. The exhibit was sponsored by United Technologies, designed by Barry Howard, and used 35 disc players running in sync. Meanwhile back at base, development work on real videowall products was well under way.



HELVAR WAS ONE OF THE PIONEERS OF ELECTRONIC BALLASTS FOR FLUORESCENT LAMPS. IT WAS FAMOUS FOR ITS FD BALLAST SHOWN HERE, WHICH WAS THE ONLY ONE THAT COULD PROVIDE GOOD DIMMING.

CHANGE OF OWNERSHIP

The ownership of Electrosonic was to change completely in the period 1986 – 1990. Until 1986, the company had four equal shareholders, the three founders and ICFC. In 1986, both Denis Naisbitt (who was shortly to retire in 1987) and ICFC sold their shares to a combination of the executive directors and Helvar. In the 1960s, the managing director of Helvar was Dieter Aminoff, and he directed the company into manufacturing electronic dimmers. By 1986, he was chairman of the owning group and encouraged Helvar to seek an alliance with Electrosonic which was seen as having some interesting products and markets in lighting control. The combination of Helvar's interest, Denis Naisbitt's retirement, and Electrosonic's need for re-financing, led to the first stage of change whereby Helvar had a large minority holding and replaced ICFC as a source of long term finance.

EXPO 86

EXPOs came thick and fast in the 1980s. Next one up was in Vancouver. Besides providing the UK Pavilion with an installation similar to that used at EXPO 85, Electrosonic's main contribution was the engineering of the show in the Washington State Pavilion.

This had a 130ft (40m) long screen which visitors watched

while standing on a travelator. The show, produced by Zaks & Perrier of New York, used three interlocked 35mm movie projectors and 69 slide projectors. Eight track tape decks, with three control tracks, a clock track and four audio tracks, followed timecode carried on one of the films.



ONE OF THE MOVIE PROJECTORS WITH ENDLESS LOOP PLATTER, A FEW OF THE SLIDE PROJECTORS, AND A TAPE DECK IN THE BACKGROUND.

THE VIDEOWALL AT THE LIVING SEAS PAVILION, EPCOT.

O3 NINETEEN-EIGHTIES

PICBLOC-256

The year 1987 was the start of a 20 year period when Electrosonic successfully produced a range of videowall processing equipment. Initially the problem was the cost of memory, but Electrosonic devised a neat way of using CCD memories (intended for a quite different application) that helped launch the first videowall processor at a sensible price - the PICBLOC-256. This needed huge printed circuit cards because many chips were needed to store a single frame of video. The first project was for a huge videowall for a TV gameshow on German Television. Electrosonic GmbH worked with one of its dealers in Germany, BKE Bildtechnik, to realize the project.



THE TELE AS GAME SHOW USED A 12 12 VIDEOWALL FOR A GAME WITH 144 PARTICIPANTS.



THE ENORMOUS PRINTED CIRCUIT CARD IN PICBLOC-256; ONE WAS NEEDED FOR EACH SCREEN.



The Great Storm of 1987 in the UK (October)

The Simpsons cartoon first appears

Mathias Rust (19 years old) lands his Cessna in Red Square



STAGE LEFT IN THE DRAMA THEATER AT THE HONG KONG APA. NOTE THE EXTENSIVE UTILITY PANELS ON THE LEFT AND THE COMPLEX MOBILE STAGE MANAGER'S CONTROL.

PEOPLE

HONG KONG APA

The largest theater installation undertaken by Electrosonic was for the Hong Kong Academy of Performing Arts in 1987 where Carr & Angier was the consultant. The contract covered the performance sound systems, stage management and communications systems, video distribution systems and the TV studio video and sound systems. Several hundred special outlet and distribution boxes were manufactured by Electrosonic for the project.



JIM BOWIE acquired early experience as a sales and service engineer in the Middle East and India before joining Electrosonic as a project engineer in 1987. Very shortly he was involved with the massive NMNS project in Taiwan working with Martin Piper. Not long after his return to the UK he was to spend nearly a year in Tokyo in charge of the Sanrio Puroland project; from there he moved to the USA where he has been located ever since. Soon becoming general manager of the "Leisure Systems" business in Burbank he went on to become CEO of Electrosonic in 2008.

PEOPLE



ALAN WILKINSON joined Electrosonic in 1987 having been Head of AV at Madame Tussauds since 1979. By 1991 he was a sales consultant for the "leisure" market, later rising to manage the UK Leisure sales team. In 2007, he helped form the new Design Team at Dartford and now works full time on design projects. He is a past president of the European Board of the Themed Entertainment Association. PEOPLE



KEVIN MURPHY spent 10 years working for the Natural History Museum in London. He joined Electrosonic in 1987 and was soon in charge of systems sales for the Cultural, Entertainment and Leisure Market. He built up a strong "leisure team" and became an Electrosonic Ltd Board Director in charge of all entertainment sales in the EMEA region. He left Electrosonic in 2007 and is now Development Director at Event Communications.

03 NINETEEN-EIGHTIES

MUSEUM OF THE MOVING IMAGE

One of the most important museum projects ever undertaken by Electrosonic was the AV system engineering for the new Museum of the Moving Image (MOMI) in London. It was the brainchild of David Francis, Leslie Hardcastle and Anthony Smith, and was designed by Neal Potter. It was one of the first museums to make extensive use of LaserDiscs as video sources.



THE CONTROL ROOM AT MOMI WAS ONE OF THE EXHIBITS. SEVENTY-TWO LASERDISC PLAYERS ARE IN THE RACKS ON THE LEFT.



THE "YOUTH CULTURE" EXHIBIT AT MOMI HAD A JUKEBOX THEME.



TAT-8, the first transatlantic telephone cable to use optical fiber, is completed

The Last Emperor wins nine Oscars at the Academy Awards

George H.W. Bush elected President of the USA

PICBLOC AT PHOTOKINA

Although the new PICBLOC videowall system first appeared in 1987, its major "launch" was at the Photokina Exhibition in Cologne in 1988. A lower cost system PICBLOC-36 was also introduced at this time. Electrosonic's booth still had plenty of room for its "traditional" multi-image and multi-media product.



THE MAIN EXHIBIT WAS A "PYRAMID" VIDEOWALL SHOWING A PROGRAM SPECIALLY PRODUCED BY TYMN LINTELL.

NMNS TAIWAN

The largest project ever undertaken by the James Gardner Studio (and one of the largest by Electrosonic) was a new 15 gallery section of the National Museum of Natural Science in Taichung, Taiwan. The project was so big that the design team also included Met Studio, Ralph Appelbaum, Brennan and Whalley and John Hart.

All AV engineering was by Electrosonic working under sub contract to Beck and Pollitzer. A major decision was that there would be no tape. The 120 exhibits with AV support required 90 LaserDisc players, 90 Carousel slide projectors, 52 automatic dimmers, 39 dissolve units, 30 digital sound stores and 32 computers.



THE DINOSAURS TEA PARTY AT NMNS USED PROGRAMMED ANIMATED FIGURES AND DIGITAL SOUND STORES.





THE "SOUNDS IN NATURE" THEATER. SHOWS PRODUCED BY MEDIA PROJECTS.

COLIN LEMMINGS worked for

Electrosonic since 1988, apart from a short break in 1991/2. For most of this time, he has been concerned with selling corporate systems, although there was a brief flirtation with Video Display in the mid 1990s.

Colin is director of corporate sales, and apart from running his sales teams, has developed long term relationships with many key clients, looking after their needs all over the world.

GMBH MOVES TO LANGENFELD

Electrosonic GmbH continued to do steady business in Germany but needed more suitable premises. In 1988, it moved to a new building in Langenfeld which provided plenty of space for setting up both videowall and multi-image systems. Theo Thome, who had joined GmbH in 1979, was responsible for project engineering.



O3 NINETEEN-EIGHTIES

25TH ANNIVERSARY

1989 was Electrosonic's 25th anniversary and the year of its biggest ever International Distributor Meeting, held at Effingham Park near London Gatwick Airport. It covered Electrosonic's Lighting Control, Videowall and traditional AV products.





First of 24 GPS satellites placed in orbit

Tim Berners Lee presents first proposal document leading to the World Wide Web

Fall of the Berlin Wall



NATIONAL RACING MUSEUM

The National Racing Museum in Saratoga Springs, NY, underwent a major refurbishment in 1989, with exhibit design by Ivor Heal. He commissioned

David Collison of Theatre Projects to deal with matters AV, who in turn arranged for Electrosonic to do the engineering. This included the provision of a superwide 35mm projection system to show a specially commissioned film produced by David called "Race America," and the construction of a fully working model of a Parimutuel Board display this required 5000 lamps and 110 microprocessors.

...... **ROOM CONTROL**

Electrosonic developed room control products from the mid 1980s. The culmination of this effort was the Meeting Room Controller (MRC) of 1989. It was a neat "all in one" product which worked well but, in the end, was not what the market wanted as its arrival coincided with the emergence of both AMX and Crestron.



CANADIAN MUSEUM OF CIVILIZATION

By 1989, Multivision Electrosonic in Toronto was almost completely owned by Electrosonic. While continuing its corporate AV work, it also took on museum work when available. The biggest such project was the Canadian Museum of Civilization which opened in Ottawa in June 1989. MEL completed the AV installation, which included 60 LaserDisc players and many Electrosonic ESTA digital sound stores. The photo is from a 1994 "open house" event at the museum where it had rented a videowall from MEL for the occasion.





WIEY M

The lease at 815 Woolwich Road was due to run out in 1990, and the site was not in an optimum location for the continuing business. Financed by Helvar's owners, a completely new Headquarters was under construction at Hawley Mill near Dartford. The architect was Clive Bewley, the contractors Rush & Tompkins, and Electrosonic's project manager was Bob Stinton. The photo was taken at the "topping out" ceremony. Dieter Aminoff, Chairman of Helvar, is flanked by staff from Rush & Tompkins and Yvonne Hegarty.

04 NINETEEN-NINETIES

SANRIO PUROLAND

The AV engineering for the Sanrio Puroland indoor theme park in Tokyo was one of the largest projects ever completed by Electrosonic – and one which was to have a profound influence on the development of the company because of the connections and friendships made during its completion. Electrosonic was contracted to Landmark Entertainment, responsible for the design and production of most of the attractions at the park which opened in December 1990. Jim Bowie was Electrosonic's on site project manager.



THE "DISCOVERY THEATER" WHICH USED HUGE VIDEOWALLS AS A BACKDROP.

EXPO 90 GAS PAVILION

The last major project completed with SCARS of Prague was the AV engineering of the Gas Pavilion at EXPO 90 in Osaka. "Cinelabyrinth" was a multitheater fantasy show where the audience could choose the storyline. Each of the ten theaters was elaborately decorated, and the show used 22 video projectors, 44 slide projectors and 200 dimmers.





Iraq invades Kuwait

The year of German re-unification

Universal Studios Orlando opens

A ROYAL OPENING

1990 was a year of big changes. Electrosonic became a subsidiary of Helvar and part of the Helvar Electrosonic Group. It moved in to Hawley Mill as its world HQ in August, and the building was formally opened by HRH The Duke of Kent in December. Hawley Mill still looks as good as it did when it opened, and is now the EMEA headquarters of Electrosonic.

PEOPLE



DAVID AMBROSE joined Electrosonic in 1990 immediately after graduating from Reading University with a degree in Physics and Electronics. He spent seven years as a sales engineer working primarily with overseas customers. His major contribution came when he was appointed Service Manager (later Service Director) in 1997. Service became a very important part of Electrosonic's business. In 2005, he was appointed Managing Director of Electrosonic Ltd, reporting to the CEO. David left Electrosonic in 2010 to become Managing Director of the UK subsidiary of Scheidt & Bachmann.



PEOPLE

ANDY GREGORY graduated with a degree in computer sciences; he joined Electrosonic in December 1990 to work as a software engineer alongside Mark Clay and Maris Ensing, upgrading the C-THROUGH videowall software and developing the EASY program. In 1995, he moved to the Burbank office and was critical to the success of the Newseum Newswall project. Later he led the development of many media source and control products developed by the Burbank team.

PEOPLE



KARL JOHNSON joined Electrosonic in Minneapolis in 1990. For most of his career with the company, he was involved with videowall technology as sales engineer, project manager, product marketing manager and finally general manager of the Products business, based in the UK. When the products business was sold in 2010, Karl moved to Extron Electronics in Anaheim, CA to become Director of Product Marketing.

10001 Image: Second sympletic symplet sympletic symplet s

04 NINETEEN-NINETIES

PROCUBE AND DISNEY

1991 was also significant for two events. One was work for the Euro Disney project (later Disneyland Paris) which was to open in 1992. Electrosonic built the parkwide audio systems, and also engineered the parade control system. The other was the development of the PROCUBE videowall cube – this activity was an initiative of the Minneapolis office which went on to build thousands of them. The PROCUBE helped get the market going because it was significantly less expensive than the imported products.

CELCO, CDU AND PICBLOC-3

In order to expand its lighting control product range to, once again, include the entertainment market, Electrosonic bought the company Celco. 1991 also saw the introduction of the last dissolve unit to be developed by Electrosonic, the Compact Dissolve Unit (CDU). PICBLOC-3, which was to become an industry standard and remain in production for nearly 10 years, was introduced as the professional videowall processor.







THE CDU WITH ITS COMPANION PROGRAMMER.



THE CELCO NAVIGATOR LIGHTING CONTROL

OPENINGS AND CLOSINGS

The 1990/91 period was one of great activity. The Electrocue manufacturing facility expanded into the brand new Fairfax building and greatly increased the amount of contract manufacture. Electrosonic Systems Inc, realizing that Minneapolis was not the heart of the entertainment industry, opened an office in Burbank, CA headed by Doug Hunt, with Jim Bowie in charge of engineering and Paul Giguere as salesman.

At the same time, Electrosonic Systems Pty Ltd had been set up in Australia by Chris and David Mason, and Electrosonic Ltd owned around 50%. The change from traditional AV to video changed distribution patterns and the decision was taken to close the Amsterdam office at the end of 1991.





ELECTROSONIC'S FIRST CALIFORNIA OFFICE, ON LIMA STREET IN BURBANK.

ELECTROSONIC AUSTRALIA CA 1991.

04 NINETEEN-NINETIES

HONG KONG

Electrosonic had been a minority shareholder in an Electrosonic Hong Kong company set up by Brian Smith in 1986, but which closed in 1990. In 1992, a regional office (not a trading company) was set up in Hong Kong. For a time, it was a joint Helvar Electrosonic office. Electrosonic still has a presence in Hong Kong providing support to projects in the Pacific Rim area.

Microsoft releases Windows 3.1

The Maastricht Treaty is signed founding the European Union

Bill Clinton elected President of the USA

EXPO 92

EXPO 92 in Seville, Spain, was something of a bonanza for Electrosonic. The company was responsible for engineering several major systems, and its equipment was to be found in 35 pavilions. In all, it had over 2000 video screens (mostly CRT monitors) and 500 slide projectors under control. The two outstanding projects were the multimedia productions in the UK Pavilion (exhibit design by Neal Potter, show productions by Media Projects and Tymn Lintell) and the "World's Biggest Videowall" in the Telecommunications Pavilion (design by Macua & Garcia Ramos, show production by Sono Multivision).



THE MAIN SHOW IN THE UK PAVILION USED A PROCUBE VIDEOWALL AS A BACKDROP, 35MM MOVIE PROJECTION, LOTS OF SPECIAL EFFECTS, A LIVE ACTOR AND THE "ANDROID SISTERS."



THE "GLOBAL VILLAGE" SHOW IN THE TELECOMMUNICATIONS PAVILION FEATURED A VIDEOWALL WITH 850 MONITORS. IN THE PICTURE EACH MONITOR IS A "PIXEL."

FIRST HD IN EUROPE

The first use of High Definition video in an automatic, continuously running multi-media show in Europe was engineered by Electrosonic. Coen Margadant project managed the "Aart's Paradise" show system on behalf of Electrosonic. The show ran at the 1992 Floriade Garden Festival

for six months. Produced by Carillon Producers, it used three Sony HDVS disc players with HD projectors. It made extensive use of animatronics and special effects.

MILLS TV

Western Developments was to become a customer for a period of 12 years as it developed a series of megamalls across the USA. Electrosonic, largely in the person of Rick Soule, engineered "Mills TV" systems that

AART IS AN EARTHWORM (RIGHT)

SEEN AT HIS CONSOLE DIRECTING

THE SUCCESSFUL GROWING OF PLANTS FROM UNDERGROUND.



THE TAPE-BASED CENTRAL CONTROL SYSTEM FOR THE GURNEE MILLS "MILLS TV" SYSTEM INSTALLED IN 1992.

Presented video content throughout the mall. Eleven such systems were installed, and represented the march of video progress. Starting with tape-based systems with CRT displays and ending with digital servers and projection displays. Electrosonic videowalls played a prominent part.

IMAGINE

In 1992, Electrosonic launched a new range of architectural lighting control equipment, the IMAGINE range. This was a real breakthrough and some of the products were still being sold 20 years later. CAD was used extensively in the design, and the dimmer modules were housed in newly available high temperature plastic. Microprocessors designed for use in automobiles were pressed into service, and a full understanding of electromagnetic compatibility issues resulted in a compact, powerful unit.



IMAGINE TWIN DIMMER MODULE AND MOUNTING CABINET.





EEC creates the European Single Market

Andrew Wiles presents proof of Fermat's last theorem (in fact not finally confirmed until 1995)

Intel Corporation ships the first P5 Pentium chips

04 NINETEEN-NINETIES

1993



MOVE TO THE CASTLE

93

Electrosonic Leisure Systems in Burbank, CA quickly ran out of space, and in 1993 moved to "The Castle" nearby. At first it occupied only part of the building, but by 2007 it occupied the whole building, and in 2008, it became the world HQ of Electrosonic.

EXPO 93

This EXPO, in Taejon, Korea, was another milestone for Electrosonic. Besides "traditional" AV work, in, for example, the UK Pavilion with exhibit design by Event Communications, the highlights were major installations in the Kia Motors and Samsung Pavilions. These both used 70mm film in systems engineered by the Burbank office. The Samsung Pavilion required two 20m (66ft) dome projection systems using 70mm film with 8 perforation pull-down running at 30 frames per second.





THE SAMSUNG PAVILION AND ONE OF ITS 70MM PROJECTION SYSTEMS.

PEOPLE

RALPH APPELBAUM ASSOCIATES (RAA)

Electrosonic had first encountered RAA on the NMNS Taiwan project in 1988, however, 1993 was to mark the real start of a continuing relationship with one of the world's leading museum and visitor center design practices. The United States Holocaust Memorial Museum in Washington, DC was a huge project designed by RAA for which Electrosonic did the AV engineering. The original system, which used 130

LaserDisc players, 29-inch and 35-inch CRT monitors, and CRT projectors with line doublers, did sterling duty for many years.



MEMORIAL MUSEUM.

MAJOR CHANGES

Despite many successful projects and new product developments in this period, Electrosonic did have some problems. The arrival of Philip Aminoff as CEO led to some significant changes. It was found that the contract manufacturing activities of Electrocue in Maidstone were unprofitable, so this part of the business was closed - although Electrocue continued to manufacture both Electrosonic and Helvar products.



1930S BERLIN CAFÉ SCENE IN THE HOLOCAUST SECTION OF THE MUSEUM OF TOLERANCE.

MUSEUM OF TOLERANCE

1993 also saw the start of another continuing relationship, this time with the Museum of Tolerance in Los Angeles. The initial design, much of which is still in place, was by James Gardner - his last major project. It was a coincidence that it included a moving Holocaust section which opened on the West Coast at the same time as the Washington DC museum on the East Coast.



PHILIP AMINOFF was appointed a director of Electrosonic in 1992, but took up his appointment as managing director in early 1993. His appointment was recommended by Dieter Aminoff (chairman of Helvar), Mikko Aro (managing director of Helvar) and Bob Simpson as best representing the new owners' interest. Philip, fluent in six languages and a graduate of INSEAD, came from a key post with Boehringer Mannheim in Germany. He was CEO of Electrosonic 1993 - 1998, and has been chairman of the Electrosonic Group since 2002.

The Channel Tunnel between England and France opens

North American Free Trade Agreement (NAFTA) established

Microsoft announces it will no longer sell MS-DOS

04 NINETEEN-NINETIES

MGM GRAND VIDEOWALL

A videowall installation that gained a lot of attention was that installed in the lobby of the new MGM Grand Hotel in Las Vegas. Sold through dealer Mobile Wall One, it was an ambitious display based on a 20×4 array of Electrosonic PROCUBES with PICBLOC-3 processing, all sourced by 20 Sony CRV component video disc players. The installation ran for many years. Typically CRTs were replaced after 20,000 hours.



THE TELSTRA INOC DISPLAY SHOWING 13 GRAPHICS IMAGES, AN OFF-AIR TV SIGNAL AND A GRAPHIC IMAGE MAGNIFIED 2^x2.



CONTROL ROOMS

Electrosonic started control room display installations in 1994. One was for a hydro-electric control room in Pitlochry, Scotland. Another was for Telstra's International Network Operations Center in Sydney, Australia. This one used Sony "cubes" and PICBLOC-3 processing with high resolution inputs. The installation was by Electrosonic Systems in Australia, which was sold to Gilbert Lodge in the same year.

ARENAS

The 1990s were days before the arrival of giant LED screens. Screens like Mitsubishi DiamondVision and Sony Jumbotron were effective, but had short life and were very expensive. Videowalls were, therefore, installed in many arenas and Electrosonic got significant business. The biggest (and most fraught) installation was at the Alamodome in San Antonio, TX. It required two 10×10 PROCUBE displays with PICBLOC-3 processing.





ENVIRONMENT THEATER

In 1994, Electrosonic paid a return visit to the NMNS in Taiwan. Here, Met Studio designed the Environment Theater, which could show three different multi-media shows in a revolving auditorium seating 150 people. Electrosonic engineered the show system, which included 86 slide projectors and 10 video projectors. The whole system had been set up in the UK before despatch to Taiwan.



The DVD (Digital Versatile Disc) is announced

"Toy Story," the first full length computer animated film, released

BRITISH LIBRARY

Electrosonic won the contract to develop and install the lighting control system for the British Library in the mid 1980s, although staff were not to move in until 1997.

Microsoft releases Windows 95

04 NINETEEN-NINETIES

1995



LIGHTING SEPARATION

95

In this period, Helvar and Electrosonic operated as the "Helvar Electrosonic Group" to the extent of having a shared catalog. However, in reality, lighting control and audio-visual activities were being separated. Lighting control products came under Helvar management, and Helvar took control of the Electrocue manufacturing facility, which by now was mainly making lighting products.



READING ROOMS AT THE BRITISH LIBRARY.

Anticipating current practice by many years, the system, called ALEC, provided for a network of 114 networked "intelligent" outstations that gave the required combination of local control and central control and monitoring. Electrosonic installed the same system at Hawley Mill so it had a valid testbed, and so the client could see what the library was going to get. The British Library project was signed off in 1995.

PEOPLE



JAMIE FARMER was a development engineer at Courtyard Electronic before joining Electrosonic as product manager, video display, in 1995, and later becoming Products Director. He oversaw the migration from standard resolution video products to high resolution products suitable for High Definition and computer graphics images. He realized these needed more sophisticated production facilities, and organized the transfer of production to Foundation Technology. His major contributions were the initiation of the the VN range that included VN-QUANTUM, and the setting up of Electrosonic AB in Stockholm with Daniel Borg. He now holds a senior position at GE, based in France.

CORPORATE INSTALLATIONS

Corporate AV installations continued to be an important part of Electrosonic's business. A promotional leaflet of 1995 lists nearly 100 corporate installations in the UK alone. Major projects in 1995 were those for the Prudential Assurance National Training Centre at Newport Pagnell in the UK, and a series of installations for Morgan Stanley in Tokyo.



PRUDENTIAL SALES TRAINING CENTER, UK.



MORGAN STANLEY BOARDROOM IN TOKYO 1995.

PEOPLE



TODD MILLER joined Electrosonic in Minneapolis in 1995, having previously helped develop and manage the Member Services Center of the AAA. Between 1995 and 1998, he was a production manager in charge of the display products made in the USA. In 1999, he was appointed general manager in charge of North American service. In 2010, he moved to the Burbank office to become vice president, Control Room Solutions.



Chess computer "Deep Blue" defeats champion Gary Kasparov for the first time

Dolly the sheep, first mammal to be cloned from an adult cell, is born

Steve Jobs' company NeXT is bought by his old company Apple Computer

04 NINETEEN-NINETIES

BRC IMAGINATION ARTS

Another important serial client was added in 1996; this was BRC Imagination Arts, founded by Bob Rogers. The first project was "Mystery Lodge," a most effective illusion show installed at Knotts Berry Farm. Electrosonic did the show engineering (but not the magic – that was BRC's department) based on their now considerable experience of automatic 70mm film presentation and show control technology.



AN IMPRESSION OF THE "MYSTERY LODGE" SHOW.

TELECOM WORLD

Support from the Hong Kong office was helpful to the success of Electrosonic's AV installation at "Telecom World," an exhibition at the new HQ of Hong Kong Telecom which opened in 1996. The exhibition was designed by Met Studio Design and included complex AV and interactive exhibits.



VIDEO COMPRESSION FOR SPIELBERG PROJECT

An important opportunity arose in 1996. Steven Spielberg had launched the "Survivors of the Shoah Visual History Foundation," and this had yielded over 100,000 hours of field tapes. The tapes needed to be copied in multiple formats, and transferred to a massive digital database. Electrosonic was commissioned to design and build the transfer workstations. Sixteen were built and these copied the incoming tapes to Digital Betacam, VHS and S-VHS tapes and encoded them to an MPEG-2 file. The files were then transferred to the Foundation's multi-media database.



THE "TELECOM WORLD" EXHIBITION.



EUROPEAN SPACE AGENCY (ESA)

In 1996, Electrosonic engineered the visual display system for the ESA launch control room for the Ariane 5 Satellite launchers in Kourou. It used 48 PROCUBES and PICBLOC-3 processing, and gave sterling service for 10 years. Electrosonic was sub-contracted to Thomson-CSF. The photo was taken during commissioning, so not all the cubes are showing an image.



The comet Hale-Bopp makes its closest approach to Earth

J.K. Rowling's "Harry Potter and the Philosopher's Stone" is published by Bloomsbury in London

United Kingdom hands sovereignty of Hong Kong to the People's Republic of China

04 NINETEEN-NINETIES

THE NEWSEUM

1997

The Newseum, devoted to the freedom of the press, is run by Freedom Forum. The current version was opened in 2008, but the first Newseum was in Rosslyn, VA and opened in 1997. The exhibition was designed by Ralph Appelbaum Associates. Electrosonic was responsible for engineering the exhibition AV, working closely with the Newseum's technical director Jim Updike. A central feature was the News Wall. This 126ft ×

 $10\frac{1}{2}$ ft (38.4m × 3.2m) display could show 36 simultaneous live video images each of which could appear at any size in any position on the wall. Nine of the brightest and highest resolution projectors available at the time (Hughes-JVC ILA with 1600 × 1200 resolution) were used. The image processing requirement was formidable, and was provided by Electrosonic's WORKSURFACE equipment, which was still under development at the time the contract was signed.

PEOPLE

HEAD OFFICE GOES WEST

Philip Aminoff was soon (in 1998) to leave the UK to head Helvar and other Aminoff business interests in Finland. Before doing so, he initiated various rationalization moves, such as transferring the Celco business to Helvar (1997) and merging Helvar GmbH and Electrosonic GmbH (1996). He also advised that because of the new balance of business, it would be best if his successor as CEO was based in the USA. Thus in 1997, Electrosonic's HQ moved to Minneapolis under new CEO Kyle Carpenter.



THE ELECTROSONIC OFFICE IN MINNEAPOLIS.



THE FIRING ROOM THEATER AT THE APOLLO/SATURN V CENTER.

KENNEDY SPACE CENTER (KSC)

In 1997, the KSC opened a huge exhibit hall featuring the giant Saturn V rocket and the Apollo spacecraft associated with the moon landings of the 1960s. BRC Imagination Arts were responsible for the exhibition and "show" aspects, most notable being a reconstruction of the "Firing Room," equipped with the original operator's consoles. Electrosonic engineered the show presentation and control system using the latest LCD projectors at the time, and rewiring the consoles to become part of the show.



KYLE CARPENTER came to Electrosonic from Honeywell where he had been Vice President of its systems integration business for building controls. He arrived in 1996 to succeed Kevin Curry as president of ESI, but the intention from the outset was that he should succeed Philip Aminoff as CEO of Electrosonic, which he did in 1997.

Kyle was the "steady hand" Electrosonic needed in a period of change. He insisted that service become a profit center, and laid the ground for it becoming Electrosonic's largest activity in terms of employee numbers, effectively replacing the previous manufacturing activity. He left Electrosonic in 2008 to become CEO of a private equity firm.



Google Inc founded by Larry Page and Sergey Brin

Construction of the International Space Station commences

"Titanic" wins best picture award at the 70th Academy Awards ceremony

04 NINETEEN-NINETIES

1998

AMNH

In the period 1996 – 2000, Ralph Appelbaum Associates designed four major galleries for the American Museum of Natural History (AMNH) in New York. All had AV installations by Electrosonic, and these mirrored technology progress of the time with the changeover from LaserDisc to video server sources, the move from CRT monitors to flat panel displays, and finally the change from CRT projectors to LCD and DLP projectors. The year 1998 was the year the Hall of Biodiversity was opened at AMNH. It had 72 channels of video playing from Electrosonic servers.



"SPECTRUM OF LIFE" EXHIBIT IN THE HALL OF BIODIVERSITY AT AMNH. BIG CRT MONITORS IN THE EXHIBITS, SMALL FLAT SCREENS OUT FRONT.

VECTOR

The WORKSURFACE project never developed into a product, but was crucial to the development of the VECTOR videowall processor, launched in 1998. In its standard form, VECTOR could accept up to eight inputs and drive up to 36 displays, each up to 800×600 resolution. High Definition and graphics versions soon followed. VECTOR was quickly recognized as the professional's choice, especially because of its excellent image scaling based on Peter Smith's patented "convolver."



SEPARATE COMPANIES

1998 saw the complete separation of Helvar and Electrosonic. All of Electrosonic's lighting interests were by now absorbed into Helvar, and Electrosonic was solely an audio-visual company. Initially the two companies remained sister companies, each with its own management, within the larger Helvar-Merca Group.



POINT OF VIEW DINER

Following its success with the Spielberg project, the Electrosonic Burbank office moved into special product development, its first offering being a four channel MPEG-2 video player. The development was propelled by the needs of a new interactive exhibit at the Museum of Tolerance. The exhibit, in the form of a traditional American Diner, was for up to 35 participants and required 40 independent video channels each with instant random access.





SCOTT MEYER had a 15-year career as an accountant at Alliant Systems and Honeywell (where he met Kyle Carpenter) before joining Electrosonic Inc as CFO in 1998. He was appointed CFO of the Electrosonic Group in 2009. He sits on the Executive Board, and has been closely involved with all the mergers, acquisitions and disposals that have occurred during his tenure.



04 NINETEEN-NINETIES

BEST BUY

A project which started in 1999, but continued for three years, became the biggest contract ever completed by Electrosonic. Best Buy installed High Definition videowalls in 90 stores in 1999, but the total finally rose to 325. Best Buy provided the HD source but the walls and processing were engineered by Electrosonic using Pioneer projectors and VECTOR processing. Electrosonic also provided service support for the entire fleet with a guaranteed 24 hour response.





THE AMAZING ADVENTURES OF SPIDER-MAN[™]

One of the most significant projects ever undertaken by Electrosonic was the engineering of the projection system for the new attraction at Universal Studios Islands of Adventure, which opened in 1999 after a three-year development period. The system needed 25 70mm movie projectors running the 8 perforation format at 30 fps. Electrosonic engineered a custom system based on components (projector heads, lamphouses, lenses, film handlers, screens) from leading manufacturers, all under its own show control system.

ORLANDO OFFICE

As a result of the greatly increased theme park activity in Florida, Electrosonic opened a new office in Orlando in 1999, which operated as part of the Burbank "leisure" operation.





BRYAN HINCKLEY had worked on various projects at the Landmark Entertainment Group before he joined Electrosonic in 1999. His first job was project engineer for the AMNH Rose Center for Earth and Space. In 2006, he moved to being a sales consultant, followed by being business manager for Design Consulting. In 2008, he became general manager for the USA products business. After its sale, he became business development manager for the USA Entertainment business.



FLOATING IMAGE AT SADLER'S WELLS

The newly refurbished Sadler's Wells Theatre in London featured an unusual video display engineered by Electrosonic. Commissioned by the theater's chief executive, Ian Albery, it was designed to be eye catching after dark, but to be invisible during the day. The 24 sq m (255 sq ft) display used a screen structure based on PDLC, which can be switched from a translucent to a transparent state. It used Barco 3200 LCD projectors and PICBLOC image processing.

20000 Image: Second state of the second

05 TWO-THOUSANDS

MILLENNIUM DOME

The Millennium was the occasion of many special events. In the UK it triggered the completion of many museum and visitor center projects, and Kevin Murphy and his "Leisure" team had something of a field day. The most obvious manifestation was the somewhat controversial Millennium Dome. In fact there were many good things in it and Electrosonic was responsible for much of the exhibition AV.

THE PLAY ZONE IN THE MILLENNIUM DOME, DESIGNED BY LAND DESIGN. ELECTROSONIC COORDINATED THE TECHNICAL INSTALLATION.

END OF AN ERA

Multivision Electrosonic's (MEL) operation in Toronto had come under the control of Electrosonic Systems Inc in 1991. It was the one part of Electrosonic that had developed a strong rental and staging business. Peter Penkala had built up this business and he became general manager of MEL when Betty Elphick left in 1998. He wanted to invest in LED screens and concentrate solely on the rental business, but Electrosonic did not want to make the investment. The solution was for Peter to buy the company which became Multi Vision Inc (MVI) in January 2000 and continues successfully today.



MEL HAD MOVED TO NORTH YORK IN 1994. THE PREMISES BECAME THE HEADQUARTERS OF MVI IN 2000.

Øresund Bridge between Denmark and Sweden opens

First crew takes up residence on the International Space Station

George W. Bush elected President of the USA





THE MILLENNIUM DOME. PHOTO CREDIT QA PHOTOS AND THE NEW MILLENNIUM EXPERIENCE COMPANY.



HIGH DEFINITION

By 2000, the Burbank team had developed a High Definition video player which was to form the basis of many high profile exhibit and public display installations. One of the first was at the Kentucky Derby Museum. In 1985, this museum had installed a massive multi image show produced by Donna Lawrence, which used 96 slide projectors in a system engineered by Electrosonic. In 2000, this was replaced by nine High Definition video projectors in an Electrosonic system using the new HD players.

ON THE OTHER SIDE OF THE WORLD, ANOTHER MILLENNIUM INSTALLATION WAS THIS GIANT VIDEOWALL IN THE CHINA MILLENNIUM MONUMENT IN BEIJING. IT USED ELECTROSONIC VECTOR IMAGE PROCESSING AND THE PROJECT WAS SUPPORTED BY THE HONG KONG OFFICE.





Wikipedia launches on the Internet

Windows XP launched by Microsoft

9/11 attack on the World Trade Center, New York

05 TWO-THOUSANDS



2001

IMAGE FROM "CORKSCREW HILL." COURTESY KLEISNE WALCZACK PRODUCTIONS WHO PRODUCED THE FILM.

CORKSCREW HILL

An installation that signaled the beginning of the end for 70mm film in theme park attractions opened in 2001 at Busch Gardens in Williamsburg, VA. The "Ireland" section of the park introduced "Corkscrew Hill," a 3D simulator ride using 59 seat motion bases.

It required 44ft \times 30ft (13.4m \times 9.1m)

screens with only 24ft (7.3m) projection distance. Larry Giles of Busch entrusted Electrosonic with solving the problem. Four Barco ELM12 projectors, then the most powerful available with 12,000 lumens, mounted to give portrait format and fitted with custom lenses, were arranged to give two pairs of edge blended images with an overall net resolution of 1900×1280 . The show was run from four Electrosonic HD players running in sync.

PEOPLE



SARAH JOYCE is one of several people who have re-joined Electrosonic after an absence. She first joined the company in 2001 as Product Marketing Manager of the products division, but left in 2003. In due course she became sales director of DRV, and when DRV joined Electrosonic in 2010, she led the integration of the DRV and Electrosonic business operations. In March 2011, she was appointed general manger, HR, for EMEA and in September 2012, was promoted to Vice President Europe, Middle East and Africa. She serves on the Electrosonic Executive Board and is currently serving a two-year term on the InfoComm Board of Directors.

PEOPLE



CHRIS CONTE joined the Landmark Entertainment Group in the late 1980s as a technical director and was a client of Electrosonic's on many projects, including Puroland in Japan and the Samsung Pavilion at EXPO 93. After a short spell as president of AVI-SPL's Las Vegas operation, he joined Electrosonic in 2001. By 2004, he was manager for all themed entertainment business in the USA, and in 2008, he was appointed vice president Entertainment for the entire Electrosonic Group.

EVENT COMMUNICATIONS

AD (CAR)

BLOCK DIAGRAM OF THE SHOW PROJECTION SYSTEM FOR THE CORKSCREW HILL ATTRACTION.

2 HO VERS

Event Communications is a UK-based company specializing in exhibit design for attractions. Electrosonic has provided AV engineering for many of these over a period of many years, starting in 1991. In 2001, Event designed Magna, a science adventure attraction sited in what was once Europe's largest steelworks, the Templeborough Mills in Rotherham, England. This had several large exhibit areas which required 40 channels of video, 14 computer interactive displays and 132 channels of lighting control.



THE "FACE OF STEEL" INTRODUCTORY SHOW AT MAGNA USED MULTIPLE SCREENS WITH LCD PROJECTORS AUGMENTED BY PANI SCENE PROJECTORS IN A HUGE CATHEDRAL LIKE SPACE.



05 TWO-THOUSANDS



INDEPENDENT COMPANY

2002 was the year that Electrosonic became, once again, an independent company. The owners of the Helvar Merca Group decided to dismantle the group structure. The result was that Electrosonic became an independent company with the main shareholders being individual members of the Aminoff family. Robert Simpson retains a small shareholding. The owners also owned, or had a majority interest in, two AV companies in Finland. These, Lightinen and Qualitron, were "rolled in" to Electrosonic – in the event only for a short time.



THE MEDIA WALL IN THE CISCO LOBBY SHOWED A MIXTURE OF PC GRAPHICS, DVD VIDEO AND SATELLITE TELEVISION. **IWM NORTH**

The last significant installation using slide projection by Electrosonic was at the Imperial War Museum North in Salford, England, in a building designed by Daniel Libeskind. Exhibit designer Alistair McCaw Real Studios enlisted Event Communications to help with the AV design, which consisted of 20 huge screens up to 20ft (6m) high and 49ft (15m) wide. At the time, electronic projection would have been prohibitively expensive. Sixty-four slide projectors gave excellent results with much higher resolution than any electronic equivalent. The Electrosonic-engineered system gave ten years of service.

LIGHTINEN

Lightinen of Helsinki had been an important customer for Electrosonic's lighting control products in the 1980s, especially when the cruise liner market developed. Lightinen also carried out AV installations, so it seemed a natural "fit" when it became

part of the group in 2002. It changed its name to Electrosonic Lightinen in 2005. Although it carried out good work, the company proved difficult to manage from the USA, and in 2010, it was sold

LIGHTING CONTROL SYSTEMS FOR THE THEN WORLD'S LARGEST CRUISE VESSEL. ROYAL CARIBBEAN INTERNATIONAL'S "FREEDOM OF THE SEAS," WERE DELIVERED BY LIGHTINEN IN 2006.

to Audico Holdings Oy, reverting to the Lightinen name. Here it is prospering and Electrosonic is pleased to have a shareholding in Audico, which it received as part of the consideration for Lightinen.

CISCO EBC

An important project in 2002 was for Cisco's Executive Briefing Center near London. It led to a long running service contract and to work in several other Cisco locations, and was also a prototype of what parts of the corporate market were beginning to demand with its mixture of training, presentation and collaboration spaces, augmented by lobby displays. The original project required the equipping of 30 meeting, teaching and presentation spaces in three buildings.

MEDIASONIC

By 2002, the product development activities in Burbank had become sufficiently important that they were run as a separate "Media Networks" division with, for a short while, a separate "Mediasonic" identity. The technical leaders of this project were Andy Gregory and Vince Hann, both of whom who had started their Electrosonic careers at Hawley Mill. Products were network oriented and the most significant was the HD FrEND (FrEND referred to the "Far End" of a network). This was a low cost High Definition player for use in the network environment. Many thousands were made.



THE HD FREND NETWORK PLAYER.

ELECTROSONIC - THE FIRST 50 YEARS



05 TWO-THOUSANDS



NATIONAL CONSTITUTION CENTER

The trend to a higher density of AV elements within museum exhibitions was exemplified by the National Constitution Center (NCC), which opened in Philadelphia on 4 July 2003. The exhibition, designed by Ralph Appelbaum Associates, boasted 60 computer interactive exhibits, 50 video replay screens and 10 audio only exhibits, all within a comparatively compact area. There was also a separate 350-seat multimedia theater which presented a 17 minute show "Freedom Rising."

FORD ROUGE FACTORY TOUR

In 2003, the Ford Motor Company opened a new plant and a new visitor center at its Rouge site in Dearborn, MI. BRC Imagination Arts designed the visitor experience which included a factory tour (with AV support) and two impressive theater shows in the visitor center. All AV engineering was by Electrosonic.

"The Art of Manufacturing" is a highlight of the tour, presented in an immersive circular multimedia theater. It combines seven screens of High Definition video with spectacular lighting, heat, fog, fans, mister and shaker effects.





NASA's "Rovers" Spirit and Opportunity land on Mars

Ground breaking for the Freedom Tower begins at Ground Zero, NYC

Production of the Kodak Carousel series of slide projectors ceases

05 TWO-THOUSANDS

2004





...WHILE THE LAS VEGAS ATTRACTION USED THE FIRST GENERATION OF DIGITAL CINEMA PROJECTORS.

CLINTON LIBRARY

2004 saw the opening of the William J. Clinton Presidential Center in Little Rock, AR. The exhibition was designed by Ralph Appelbaum Associates and AV integration was by Electrosonic. Large LCDs had only just become available – the 40-inch displays in this photograph of the "Alcoves" exhibit, which presented milestones and themes of the Clinton presidency, are notable for their thick frames.



SCOTLAND

Audio Visual Consultants (AVC) of Edinburgh, run by Sandy Bolton, was a long standing dealer for Electrosonic AV equipment. By the 2000s, it had become a partnership with Douglas Bolton (Sandy's son) as managing director. A combination of Electrosonic wanting to expand its service reach, and AVC needing more working capital, led to Electrosonic taking over AVC in 2004. It is now a most valuable part of Electrosonic, serving corporate and museum customers in Scotland and the North of England, with a special emphasis on the energy industries.

MIKE BUCHAN was a partner in AVC when it was acquired by Electrosonic. His role was, and remains, that of the design, costing, installation and servicing of projects. He leads the Edinburgh "delivery team" which completes projects using its own resources, supported when necessary by the Dartford team. Mike has been fully trained for offshore work.

STAR TREK^{**} IN SPACE PARK BREMEN AND LAS VEGAS

Space Park Bremen, opened in 2004, was a big indoor theme park with a space theme for which Electrosonic did the majority of the AV engineering. It was an important and prestigious project which sadly failed commercially. A first class attraction within it was "STAR TREK™ Borg Encounter." This included a 250 seat "4D" theater with a 13.2m (43ft) wide silver screen. It was the last 70mm film based system (using twin Kineton projectors) to be installed by Electrosonic.

Coincidentally, a similar STAR TREK[™] attraction opened at the Las Vegas Hilton in the same year, also with AV engineering by Electrosonic, but this time the theater was designed for 48 people with a 10.7m (35ft) screen and used two of the then completely new Christie CP2000 "cinema" projectors.

PEOPLE



YouTube is founded

The Airbus 380 super-jumbo jet makes its maiden flight

Angela Merkel becomes first female Chancellor of Germany

05 TWO-THOUSANDS

2005

EXPO 2005

Electrosonic's contribution to EXPO 2005 in Aichi, Japan, was the AV engineering within the USA Pavilion, with exhibit and show design and production by BRC Imagination Arts. The installation included a pre-show that introduced Benjamin Franklin, a main theater show which used multiple screens and many special effects, and an exhibition area, the highlight of which was a NASA exhibit showing "live" video images from the "Rover" on the surface of Mars.



THE THEATER SHOW. THE FIGURE OF FRANKLIN IS BEING PROJECTED ON A DIFFERENT SCREEN SURFACE THAN THAT OF THE MAIN IMAGE.



THE LIFELINE TABLE AT TH CHURCHILL MUSEUM. PHOTO: AV MAGAZINE.

CHURCHILL MUSEUM

A museum which gained worldwide attention when it opened in 2005 was the Churchill Museum, in fact a new but integral part of the Cabinet War Rooms – underground in Westminster and where Churchill led the UK government in World War II.

Electrosonic was responsible for AV integration in the museum, which was designed by Casson Mann. The exhibit which drew the most attention was the Lifeline Table, a 13m (43ft) long table which acts as an electronic filing cabinet of Churchill's life with access to 4,600 pages. Up to 26 visitors can access it at any time. The Lifeline software was developed by Small Design Firm Inc of Cambridge, MA.

IMAGE PROCESSING

Technology advances were coming thick and fast in the 2000s, and Electrosonic had to develop completely new image processing products to satisfy market needs, particularly in respect of network compatibility. In 2005, this resulted in the development of VN-QUANTUM as the main videowall image processor which can deal with a huge number of local and network delivered image sources simultaneously, and VN-MATRIX as a high performance codec which can stream high resolution images over networks. VN-MATRIX offers an optimum combination of minimum bandwidth, low latency, and immunity to high error rates.



THE UK HIGHWAYS AGENCY REGIONAL CONTROL CENTRE AT GODSTONE NEAR THE M25 MOTORWAY, ONE OF SEVERAL HIGHWAYS AGENCY CONTROL ROOMS USING VN-QUANTUM IMAGE PROCESSING.

DESIGN CONSULTING

The years 2002 – 2012 marked several acquisitions, start-ups and disposals as Electrosonic sought to optimize its business mix. In 2005, it set up a representative office in Shanghai, and took over the systems integration activities (only) of Scharff Weisberg in New York. Its most significant move was purchasing Associates in Media Engineering (AME). The team from this respected systems design company became an integral part of the Burbank Entertainment division; however, "Design Consulting" remains a separate unit offering independent design and consulting services, primarily for entertainment projects.



Twitter is launched

Paul McCartney is 64 (he wrote the song "When I'm Sixty-Four" when he was 16)

Al Jazeera launches its English language news channel

05 TWO-THOUSANDS

2006



ELECTROSONIC AB STARTED BUSINESS IN STOCKHOLM IN AN OFFICE SHARED WITH HELVAR AB, BUT SOON MOVED TO IDEAL PREMISES IN NEARBY BROMMA WHERE THERE IS ROOM FOR SYSTEM SET-UPS AND DEMONSTRATIONS.

SWEDEN

In the mid 2000s, a Swedish systems integrator, Displayit, had expressed interest in Electrosonic's image processing products, but, following some business difficulties at the company and at Jamie Farmer's instigation, Electrosonic AB was set up in 2006 with Daniel Borg and Michael Fredin, originally from Displayit, in charge. It has been successful from the outset with many important control room and corporate installations to its credit – not to mention the equipping of over 100 cinemas in Sweden with NEC digital cinema projectors.

TRAFIK STOCKHOLM

The first major project undertaken by Electrosonic AB was the installation of the display system for the new control room of Trafik Stockholm. It used 16 Mitsubishi 67-inch SXGA+ DLP[™] "cubes" with VN-QUANTUM processing. The installation was a big success both for the client and Electrosonic, and led to much further work.

4K OPEN HOUSE

Electrosonic's Burbank office holds regular "open houses" for its clients. These are a mixture of social occasion and technology update – the aim is always to feature some relevant design, technology or process development. Some are aimed specifically at the membership of the Themed Entertainment Association (TEA) of which Electrosonic is a strong supporter. Electrosonic was one of the first companies to install 4K projection systems in theme park attractions. Its 2006 open house included demonstrations of the then new Sony 4K projector.



DEMONSTRATING 4K PROJECTION AT THE 2006 "OPEN HOUSE."



PEOPLE



DANIEL BORG was Nordic Product Manager for NEC projectors and PDPs at NEC Scandinavia before joining Displayit. This move led directly to the founding of Electrosonic AB, and Daniel has managed the company since its inception, successfully managing the change from a products sales emphasis to a solutions business. Daniel is a member of Electrosonic's EMEA Leadership team.



First generation iPhone goes on sale

Final book in the Harry Potter series sells 11 million copies in 24 hours

TGV in France breaks world speed record for a conventional train at 575 kph (357 mph)

05 TWO-THOUSANDS

2007 💆



"THE GREAT GLASS ELEVATOR." PHOTO FROM PHIL HARTLEY ASSOCIATES.



"CHOCOLATE INFINITY" AT CADBURY WORLD.



THE WAVE WALL AT GEORGIA AQUARIUM.

CHOCOLATE ATTRACTIONS

2007 was Electrosonic's "Year of Chocolate" with installations in three different attractions with a chocolate theme. At the UK's biggest theme park, Alton Towers, a new attraction "Charlie and the Chocolate Factory," designed by Tussauds Studio opened. AV integration was by Electrosonic. The finale scene, "The Great Glass Elevator," won a Thea Award.

Over at Cadbury World, possibly the most popular factory tour in the UK, a new attraction designed by Event Communications called "The Purple Planet" opened. This featured a series of "whole body" interactive exhibits; for example, "Chocolate Infinity" had floor projected images which react to pressure sensors in the floor and to camera images of the participants.

In the USA, "The Great American Chocolate Tour" ride, designed by Gary Goddard Entertainment, opened at Hershey's Chocolate World in Hershey, PA. The 1200ft (365m) ride was supported by a multi channel audio/video installation by Electrosonic.

GEORGIA AQUARIUM

The world's largest aquarium attracted 3.5 million visitors in its first year and won a Thea Award in 2007. The Themed Entertainment Association Awards are presented to outstanding attractions (not to the builders, but the fact that many award winners are Electrosonic customers does provide some reflected glory!). The exhibit design at the Georgia Aquarium was by PGAV, and Gary Goddard produced a 4D show for it. AV integration was by Electrosonic.

BEIJING SKY SCREEN

By the mid 2000s, LED screens were becoming ubiquitous. Electrosonic supplied source and image processing systems to many installations. In 2004, it supplied a High Definition playback system to the Fremont Street Experience in Las Vegas. Not surprisingly, China followed suit, and in the Beijing business district Opto Tech Corporation of Taiwan installed a 200m × 30m (656ft × 98ft) "sky screen" in 2007. It used an Electrosonic playback and VECTOR image processing system.



LONDON TRANSPORT MUSEUM

The London Transport Museum in Covent Garden re-opened in 2007 after a two year £22 million refurbishment and extension. Principal designer for the exhibition was the RAA London office, and principal AV Systems integrator was Electrosonic. More than 150 exhibits featured AV elements.

> AMAZING FLOOR PROJECTIONS IN THE "DESIGN FOR TRAVEL" GALLERY AT THE LONDON TRANSPORT MUSEUM. PHOTO BY DAVE PATTEN OF THE SCIENCE MUSEUM.





The Large Hadron Collider is inaugurated at CERN, near Geneva

Lehman Brothers files for Chapter 11 bankruptcy

Author and geostationary satellite inventor Arthur C. Clarke dies at age 90

05 TWO-THOUSANDS

2008



THE PHOTO IS OF THE "RAISED IN THE WORLD" SHOW, USING EIGHT SYNCHRONIZED SCREENS IN A SPACE DOMINATED BY A CEILING MADE ENTIRELY OF HEINEKEN BEER BOTTLES. PHOTO: BRC.

HEINEKEN EXPERIENCE

BRC Imagination Arts was commissioned to completely overhaul the tour at Heineken's historic brewery in Amsterdam. The resulting "Heineken Experience" opened in 2008. Electrosonic's UK office was appointed principal AV systems integrator under subcontract to BRC.



THE DESIGN CONSULTING OFFICE WAS ONE OF THE FIRST REFURBISHMENT PROJECTS AT THE "CASTLE" IN BURBANK.

HEAD OFFICE GOES FURTHER WEST

In 2008, Jim Bowie was appointed CEO of the Electrosonic Group and this resulted in the operational headquarters moving to Burbank, CA. One of Jim's first actions was to recognize that Electrosonic had two businesses, "Products" and "Systems." In 2007, Electrosonic had taken over full occupation of the "Castle," allowing all Burbank activities to be under one roof, and marking the start of a rolling program of building refurbishment.



GALLERY SHOWS HISTORIC NEWSPAPERS. ELECTRONIC INDEXES HELP NAVIGATE THE COLLECTION AND OVERHEAD 20 PROJECTORS RUN HISTORIC NEWS FILMS.

NEWSEUM TWO OPENS

The "new" Newseum, sited on the Mall in Washington DC, replaced the 1997 version and opened in 2008. Once again Electrosonic worked with RAA as exhibit designer, and Jim Updike from the Newseum to deliver the exhibit AV. Electrosonic installed the AV systems in 14 out of 15 theaters, a 4D theater system (with the show by Cortina Productions), a custom engineered "be a reporter" system, the audio-video systems within exhibits and an 800-loudspeaker, 80-zone public address system.



VISITORS ENJOYING THE AMAZING GETTYSBURG CYCLORAMA SOUND AND LIGHT SHOW.

GETTYSBURG

The new visitor center at the Gettysburg National Military Park opened in 2008 with exhibit design by Gallagher & Associates. Electrosonic was responsible for AV systems integration and supports the center with on-site service. The installation included two theaters with 47ft (14.3m) wide screens running the show, "A New Birth of Freedom" produced by Donna Lawrence, a sound and light system to accompany the magnificent 377ft (115m) Gettysburg Cyclorama, and exhibit AV throughout the accompanying Museum of the Civil War.



Death of entertainer Michael Jackson

UNESCO launches the World Digital Library

NASA announces it has found significant quantities of water on the Moon

05 TWO-THOUSANDS

2009



WORLD WAR II MUSEUM

In November 2009, the National World War II Museum in New Orleans opened a new building housing the Solomon Victory Theater, an addition to the museum built specifically to house "Beyond All Boundaries," a hugely impressive cinematic experience that tells the tale of America's victory in the "war that changed the world." The show was designed and produced by the Hettema Group, and Electrosonic was responsible for the design and integration of the audio-visual and show control system.



PHOTO: ADRIAN RAY

SCOTCH WHISKY EXPERIENCE

The Scotch Whisky Experience, sited right next to Edinburgh Castle, opened for business in 1988. During the winter of 2008-2009, the visitor attraction was completely revamped and the "new" experience opened in May 2009. Electrosonic completed

the AV installation for the attraction, which included synchronized lighting, sound and video for a dark ride "the Barrel Ride." The photo shows visitors passing a copper pot still. The tunnel of animated lights represents the cooling of the wash in a copper coil referred to as the "worm."



ONE OF THE MEETING ROOMS IN THE SUN MICROSYSTEMS EBC.

EXECUTIVE BRIEFING CENTER

A problem faced by Electrosonic is that it is not possible to report about most of its corporate installations because of nondisclosure agreements in place. Happily there are a few exceptions – one was an "Executive Briefing Center" (EBC) completed in 2009 at the Linlithgow European Headquarters of Sun Microsystems (now part of Oracle) just outside Edinburgh. Electrosonic was

the AV systems integrator for the new EBC, which was for senior executives in user and potential user organizations where they could learn how Sun's unique technologies could improve their business. It consisted of a Reception Area, a Technology Showcase, four Conference Rooms and various breakout and support spaces. Linking the whole lot together was a Network Operations Center (NOC).



World's tallest building, the Burj Khalifa, opens in Dubai, UAE

Ash cloud from the eruption of Iceland's Mount Eyjafjallajökull disrupts air traffic

, WikiLeaks publishes 250,000 American diplomatic cables (and much else)

05 TWO-THOUSANDS

2010

EXPO 2010

EXPO 2010 in Shanghai was the biggest EXPO ever with 73 million visitors. Electrosonic was responsible for the AV installations in three major pavilions. During the installation phase it had 35 people on site, and had a substantial support staff presence for the duration. For two of the pavilions, the USA and the Information and Communications Pavilions, Electrosonic was contracted to BRC Imagination Arts; it was contracted directly to the client in the case of the Shipbuilding Pavilion, where the exhibit designer was Ralph Appelbaum Associates. Electrosonic's Shanghai office provided essential support to clients throughout the EXPO period.



THE "DREAM BIG" SHOW IN THE INFORMATION AND COMMUNICATIONS PAVILION.





HUGE GESTURE INTERACTIVE DISPLAY IN THE SHIPPUILDING PAVILION.



THE DRV BASE AT CANNON WORKSHOPS IN THE HEART OF THE CANARY WHARF FINANCIAL DISTRICT IN LONDON IS NOW AN ESSENTIAL PART OF ELECTROSONIC'S SERVICE INFRASTRUCTURE.

SHOC IN AFRICA

The World Health Organization is a long standing customer of Electrosonic. It has equipped a number of Strategic Health Operations Centers ("SHOCs") for the WHO, possibly the most remote being that in Brazzaville in the Democratic Republic of Congo. This control room installation was completely pre-fabricated and clientapproved at Hawley Mill in the UK before delivery to site in 2010.

BIG CHANGES

2010 was a year of change for Electrosonic. For some time it had been clear that the "products" business presented difficulties. Its major sales channels had become systems integrators, and systems integration had become Electrosonic's biggest business, thus presenting conflicts of interest. An excellent solution to the problem was provided by Extron Electronics who bought the Electrosonic products business in its entirety - "products" employees transferred to Extron (most without having to move their desk). This move allowed Electrosonic to invest in what had become its service oriented business. In its biggest ever acquisition it bought the Multimedia Group, otherwise DRV Ltd.







DAVID ROFFEY joined Electrosonic in 2010. David was a co-founder of DRV (his colleague Roger Vinton left the company shortly after the merger to set up a new products business).

David's career has spanned all aspects of AV installation including theaters, churches, broadcast studios and corporate venues. At Electrosonic, he has been critical to the successful integration of DRV. He is a member of Electrosonic's European Leadership Team and is in charge of technical resources.

20111 Image: Space shuttle Atlantis completes its last space shuttle mission Image: Space shuttle Atlantis completes its last space shuttle mission Image: Space shuttle Atlantis completes its last space shuttle mission Image: Space shuttle Atlantis completes its last space shuttle mission Image: Space shuttle Atlantis completes its last space Image: Space shuttle Atlantis completes its last space

05 TWO-THOUSANDS

NEW-YORK HISTORICAL SOCIETY

In 2011, The New-York Historical Society Museum & Library, New York's oldest museum, completed a major makeover. Exhibit design was by Lee H. Skolnick Architecture+Design. Electrosonic was responsible for the AV systems integration, which included a major show, the "New York Story" produced by Donna Lawrence and presented in a 300-seat auditorium. AV based exhibits included an interactive "Living Painting" and the "Federal Wall" exhibit, both with AV content by Small Design Firm.



THE "FEDERAL WALL" EXHIBIT WITH ROTATING LCDS THAT CAN BE "AIMED" AT OBJECTS OF INTEREST.



THE "LIVING PAINTING." VISITORS CAN INTERACT WITH IT VIA A MICROSOFT KINECT"CAMERA.



SCOTTISH GOVERNMENT

In 2011, the Media Briefing Centre of the Scottish Government in St Andrew's House, Edinburgh, was completely re-equipped and refurbished. Electrosonic's Edinburgh office was the AV systems integrator for the project which included high resolution rear projection, TV lighting and multiple "clean" audio feeds for the media.



MANHATTAN

Electrosonic has long had an "East Coast" presence in the USA, based in New Jersey, largely to support museum designers. However to support corporate clients, a Manhattan base was considered essential, and this was provided by the 2011 purchase of Excel Media. Excel, founded by Robert Menell in 1995, had a similar clientele to that of Electrosonic. The offices are on the ninth floor of a building in the Garment District near Times Square.



THE WAVE

An outstanding installation in 2011 was at the National Maritime Museum (Greenwich, UK). This was for "Voyagers," a gallery exploring Britain's maritime heritage designed by Real Studios. A central feature is "The Wave," a 25m (82ft) long wave-like structure featuring video projected images accompanied by a dramatic soundscape. Video creative production was by The Light Surgeons.

PHOTO: REAL STUDIOS



Diamond Jubilee of Queen Elizabeth II

Encyclopedia Britannica discontinues its print edition after 244 years

CERN announces discovery of a particle with properties consistent with those of the Higgs Boson

05 TWO-THOUSANDS



2012

THE "CREATE YOUR OWN SUSTAINABLE BUILDING" EXHIBIT USES 5M (16FT) WIDE PROJECTED IMAGES.

GLOBAL IMMERSION

At the end of 2012, Electrosonic bought Global Immersion, a specialist in immersive environments and big screen presentation, and itself a buy-out from simulation specialists SEOS. The operation has been folded into Electrosonic's Entertainment division, and has contributed to the addition of giant screen cinema and immersive projection systems to the division's repertoire.



THE PROJECTION SYSTEM AT THE SABANCI PLANETARIUM IN TURKEY WAS SUPPLIED BY GLOBAL IMMERSION.

THE "FORCES OF CHANGE

SHOW USES TEN PROJECTORS.



PHOTO FROM BATWIN+ROBIN.

NATURE RESEARCH CENTER

deliver the supporting AV system.

A hemispherical structure, cantilevered onto the new Nature Research Center wing of the North Carolina Museum of Natural Sciences, forms the "screen" for an immersive multimedia experience – the SECU Daily Planet. The 40ft (12.2m) high screen offers a massive visual canvas to visitors on three floors. It presents spectacular scenes from nature, and serves as a backdrop to scientists making live presentations on topics as diverse as excavating dinosaur fossils or exploring beyond the solar system. Electrosonic engineered both the Daily Planet show system and the AV interactive exhibits throughout the wing; Electrosonic's design consulting team was involved throughout the five year project. The exhibit designer was Andrew Merriell & Associates, and the content producer for the Daily Planet was Batwin+Robin.

LKAB

LKAB is the technical leader in supplying iron ore pellets to the steel industry. Its mines are in north Sweden above the Arctic Circle. In June 2012, it opened a new research center in Koskullskulle, embodying a welcome center for visitors to the nearby Malmberget mine. Electrosonic was responsible for engineering the AV facilities at the center. The main presentation space seats 120 people and is dominated by a videowall made up from 192 Christie Microtiles arranged 16×12 , giving an overall image size of $6.5m \times 3.7m$ (21.4ft $\times 12$ ft).





Most powerful meteor in over a century explodes over Chelyabinsk in Russia

Pope Benedict XVI resigns, the first pope to do so in nearly 600 years

Edward Snowden discloses US Government mass surveillance activities

05 TWO-THOUSANDS

IEMS AT LAX

2013

The signature feature of the new Tom Bradley terminal at Los Angeles International Airport is the IEMS – Integrated Environmental Media System, which went live in September 2013. It includes seven digital media displays based on over 12,000 sq ft of high resolution LED. Design was by Sardi Design, content by Moment Factory and Digital Kitchen. Smart Monkeys was the technical consultant. Electrosonic was responsible for the overall systems integration and the detailed engineering of the source and control system. While the displays show commercial content, the core content is entertainment with many amusing sequences. The scale is big with the displays really seeming to be part of the architecture, not tacked on.



THE 72FT (22M) HIGH "TIME TOWER" CLAD IN HIGH RESOLUTION LED. THE 75FT (23M) WIDE DEPARTURE DISPLAY IS IN THE BACKGROUND.

THE IMPRESSIVE SOURCE AND CONTROL SYSTEM ENGINEERED BY ELECTROSONIC FOR THE IEMS.



THE "WELCOME TO OLYMPIA" EXHIBIT.



KENNEDY SPACE CENTER

Electrosonic first worked at the Kennedy Space Center in 1984, engineering a multi-media presentation system for the Orientation Center. Since then it has worked on several major exhibits there, including the Saturn V Apollo theater. The most recent project was in 2013 with the opening of the Atlantis shuttle exhibit. The extensive AV system includes a 110ft \times 20ft (33.5m \times 6m) LED display which carries the image of the Earth above the real Atlantis shuttle. Electrosonic worked with the operator Delaware North Companies and exhibit designer PGAV.

THE OLYMPIC MUSEUM

The Olympic Museum in Lausanne, Switzerland, reopened to the public on 21 December 2013 after a two year renovation. Metaphor of London prepared the masterplan for the new and greatly enlarged exhibition, and Mather & Co of Wilmslow did the detailed design. The exhibition makes extensive use of AV and interactive techniques. Electrosonic designed the AV system under sub-contract to Centre Screen of Manchester, the media producer, and carried out the system engineering and integration under a separate sub-contract to Paragon Creative of York, the exhibition fit-out contractor.

FIFTY YEARS LATER

Fifty years after its start-up in two rooms in Greenwich Vegetable Market, Electrosonic is now a multi-million dollar company with headquarters in Burbank, CA. Best known for its AV engineering expertise, it continues to complete outstanding installations. Three examples from sites of world importance are shown here.

05 TWO-THOUSANDS

THE NATIONAL SEPTEMBER 11 MEMORIAL & MUSEUM

This huge museum complex, on the site of Ground Zero, opened to the public in May 2014. Exhibit design was by Thinc Design and Layman Design. AV design was by PPI Consulting, with AV systems integration by Electrosonic who worked on the project over a period of several years.



PHOTO: JEFFREY TANENHAUS.



LONGBOWS ABOUT TO FIRE ARROWS THROUGH THE AUDIENCE IN THE 3D PRESENTATION.

BATTLE OF BANNOCKBURN VISITOR CENTRE

Opened in early 2014 in time for the 700th anniversary of the Battle of Bannockburn, the new visitor centre is a joint project of the National Trust for Scotland and Historic Scotland. The exhibit design is by Bright White and is based on a dramatic immersive 3D presentation which has been widely praised by both experts and the public. Electrosonic worked with Bright White to develop the AV design and complete the systems integration.

STONEHENGE VISITOR CENTRE

Stonehenge is the best known pre-historic monument in Europe and is a World Heritage Site. Opened at the end of 2013 in time for the 2014 season, its new visitor centre greatly enhances a visit to the site. The exhibition within the centre, designed by Haley Sharpe, makes excellent and relevant use of AV, particularly in the 360° presentation "Standing in the Stones," which in just a few minutes gives a 365 day view from within the stone circle. The AV systems design and integration was by Electrosonic.



"STANDING IN THE STONES" THE 360 SHOW.

ELECTROSONIC - THE FIRST 50 YEARS

05 TWO-THOUSANDS



MARKING THE ANNIVERSARY

To mark Electrosonic's 50 years in business it has published a book "Electrosonic – 50 Years on the Audio-Visual Front Line." This magazine has drawn heavily on the book, details of which can be found on Electrosonic's website.



⁶⁶ This book is both a remarkable record and an indispensable read for anyone with an interest in the history of audio-visual technology ⁹

-Lighting & Sound International

⁶⁶... packed with information and images, it is not only the perfect gift for the AV specialist in your life but will also interest anyone interested in theme park history and technology in general⁹⁹

- Blooloop

BACK TO GREENWICH MARKET

The actual anniversary date was 3 March 2014, however practical considerations meant that it was Saturday, 8 March when a key celebration took place. On this day, Electrosonic's owners (members of the Aminoff family), the surviving founders, the Board of Directors and the Executive Management Board, all convened at Greenwich Market (picture on Page 5).

The actual first premises of Electrosonic in the market are now part of the busy "antiques" and paraphernalia market and impossible to access, but, conveniently, they are only a few meters away from the Admiral Hardy pub, which had been an indispensable amenity in the early days.



JIM BOWIE, ELECTROSONIC'S CEO, WITH FOUNDERS MIKE RAY (CENTER) AND BOB SIMPSON AT THE ADMIRAL HARDY, 8 MARCH 2014. THE THIRD FOUNDER (THE LATE DENIS NAISBITT) WAS REPRESENTED BY MEMBERS OF HIS FAMILY.

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