

APRIL 2020



ELECTRONICS SOURCING  
15<sup>TH</sup> ANNIVERSARY SPECIAL EDITION  
2005 - 2020

AN MMG PUBLISHING TITLE

# 15-years of challenges and fun

*In these uncertain times, Electronics Sourcing's founder and publisher, Mark Leary, takes this opportunity to thank readers, advertisers and staff alike as the magazine marks its 15th Anniversary*

Let's set the scene. It's 2005 and I have a five-year-old and three-year-old at my ankles, permission from Mrs Leary to re-mortgage the house, and an abundance of industry contacts accumulated since I joined the industry in 1993. Now was the chance to publish an educational magazine for purchasing and supply chain professionals in the electronics sector.

Building a new 100 per cent telephone researched circulation from original Companies House data, broken down by SIC Codes, was a challenge in itself. (Accidentally deleting a slice of the research data with a careless slip of the finger was a memorable low).

With the playroom converted into a three-person office, MMG Publishing was up and running on Valentine's Day 2005.

Having secured this unique audience, I played my trump card. Enter a rather talented Jon Barrett. Jon has been my trusted editor-in-chief since issue one of *Electronics Sourcing UK* and his understanding of the global electronics design, procurement and manufacturing/test sectors is second to none. Having edited titles in all these key sectors, he is the backbone to *Electronics Sourcing's* editorial quality control and the exclusive content our readers have come to expect.

So, my first thankyou is to Jon. Long may he remain the face of *Electronics Sourcing*.

The first edition of *Electronics Sourcing UK* was published in April 2005, followed almost instantly by postbags

of subscription cheques from buyers and purchasing professionals overseas paying to receive the UK edition. After contacting some of these readers it was apparent *Electronics Sourcing UK* was globally unique, hence their desire to subscribe and use the title to help them source components for their manufacturing facilities.

Eighteen-months later MMG's in-house circulation research department started building a new reader database of electronics purchasing professionals located throughout Europe. In November 2008 the first issue of *Electronics Sourcing Europe* was published and revealed at Electronica.

With subscription cheques now arriving from electronics purchasing professionals in the USA and Canada, MMG started building another 100 per cent telephone researched database for North America and the first edition of *Electronics Sourcing North America* was published in April 2010 in time for the EDS Show in Las Vegas.

*ESUK*, *ESEU* and *ESNA* are all edited by Jon. With the right editorial content, matched with the best circulation, you generate readership: something MMG is renowned for.

The last 15-years have also seen one-day trade events in the UK and USA, plus eBOM.com which is supported by the ECIA Authorised part search tool and sees visitor traffic grow on a week-by-week basis.

The MMG team has joined Jon and myself on this journey and assisted greatly

in providing the best educational information for our readers.

Another big thankyou goes to our advertisers who have supported *Electronics Sourcing*, many remaining 100 per cent loyal from the publication's earliest days. We are proud to have supported these companies as they market their brands, services and components to electronics purchasing professionals around the world.

Last, but not least, I would like to thank the thousands of readers for their willingness to use *Electronics Sourcing* as one of their primary purchasing tools, plus the positive feedback we so often receive.

From day one, my blueprint for MMG was to be a professional, easy to deal with company providing value for money exposure and unique editorial content. This remains our focus today.

On behalf of the entire MMG team we look forward to many more editions of *Electronics Sourcing* from this passionate privately owned company.

Yours sincerely

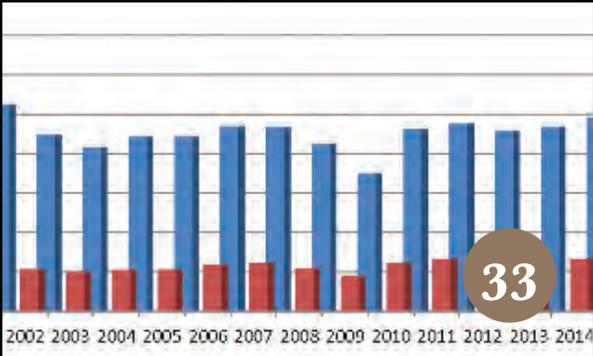


**Mark Leary**  
Founder and publisher



# ELECTRONIC SOURCING 15<sup>TH</sup> ANNIVERSARY

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# Widest selection of the newest components

*In this article, Mouser introduces the depth and breadth of its product offering, plus the support infrastructure buyers rely on to keep their manufacturing lines flowing*

**M**ouser Electronics is a worldwide leading authorised distributor of semiconductors and electronic components. Part of Berkshire Hathaway, the company specialises in the rapid introduction of new products and technologies for engineers and buyers worldwide.

The product offering includes semiconductors, interconnects, passives, electromechanical, plus a range of other components from more than 800 leading manufacturers. Mouser sells millions of tiny parts that function as the essential building blocks of new product design.

Every day, multiple times a day, Mouser gets the newest, cutting-edge components that are smaller, faster and smarter. If your job is to help solve problems, invent things and answer questions no one has asked before, Mouser is there to help.

You can't manufacture the future with products from the past, so Mouser's mission is to stock more new products than any other distributor. Having access to the newest products spearheads the development of new design ideas. Mouser also supplies engineers and buyers with new information to aid the design and buying process—and lots of it. Detailed information can be found on its website, including

*Newest Products, Technical Resources and Services & Tools sites, turning knowledge into know-how.*

With a commitment to customer service excellence, 27 global Customer Support Centers, the widest product selection, plus same-day shipping, Mouser helps customers get innovative designs to market faster and easier. The company works hard to make sure customers always get what they need, when they need it. To help expedite orders and answer questions, each location provides local language support and can transact business in the preferred local currency, all from the same time zone.

Over 1mft<sup>2</sup> facilities at Global Headquarters and Distribution Center



Over 1,050,000 parts in inventory

## BY THE NUMBERS

On-time shipping arrival:  
99% success rate

Authorised distributor for  
over 800 manufacturers

Industry's widest selection  
of components: over  
1,050,000 parts in inventory

Over 1mft<sup>2</sup> facilities at  
Global Headquarters and  
Distribution Center

55 new vertical lift  
modules: largest  
installation in North  
America

27 Global Branch Offices

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belts

Next day US delivery (2 to 5  
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Genuine traceable  
components



Simple Buying  
Solutions



Ready-to-ship  
inventory

# Granular attention to customer needs

*Rapid Electronics' managing director, James Bates, reflects on the personal aspects of its customer management in an increasingly e-commerce world*

It only seems like yesterday that Rapid Electronics was reflecting in the 10th anniversary special edition of *Electronics Sourcing*—looking back on a decade of significant change in the electronics industry and within the Colchester-based business. The talk was mainly about the move from catalogues and print to web purchasing and e-commerce, and the importance of social media in brand perception. In the five years since, the company has only seen that trend continue, with more and more sales coming online.

With shrinking customer loyalties there is increased competition, and to find that competitive edge Rapid has devoted much of the last two years to prioritising the personal aspects of its customer management. The company now has a network of business development managers across the UK who look after the day-to-day needs of its established account holders, giving that granular attention to detail that customers value. Rapid has invested in e-commerce while maintaining the personal touch.

Regarding customer service, Rapid was recently awarded the *Customer Service Excellence Standard*, a quality mark demonstrating that a business has achieved a high level of customer service in areas such as customer engagement and consultation, customer experience, company culture, information quality and service delivery.

In 2019 the company achieved ISO 45001

*Occupational Health and Safety Management System*, and the ISO 14001 *Environmental Management System*. Bates added: “To have achieved just one of these accreditations would have been a significant milestone. To have gained all three in the same year demonstrates the strength of Rapid’s commitment to quality management, customer service and continuous improvement.”

In 2016 Bates became managing director and the company has repositioned itself from a broadline distributor to one focusing on individual sectors and developing a service-led approach.

‘Helping you make it’ has become the company’s core value—motivating staff and giving customers everything they need to design and manufacture innovative products and technologies. This involves high service levels and innovative online solutions as well as components, consumables and equipment.

Bates continued: “It has been a challenging period, but hugely rewarding. We have introduced some major new services that reduce the risks in the supply chain for the customer and bring a high level of product governance into our operations. Perhaps though it is what we have done to promote zero emission transport that we should be most proud.”

In 2017 Rapid started selling charging stations for electric vehicles. In 2019 it launched Replenishh, a new division specialising in equipping electrical contractors and EV

charging point installers with the products, training and support they need.

Bates concluded: “With the deadline on the sale of new petrol and diesel vehicles now 2035, that specific timeframe seems prescient. We know that we will have played a role in building the UK’s EV charging infrastructure and helped UK business tackle the environmental challenge we all face in the 21st century. We hope that through our innovation and technical capabilities we will have become integral to the product design lifecycle of our key customer groups.”

“**‘Helping you make it’ has become the company’s core value**”



James Bates, managing director of Rapid Electronics

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\*Our long term stock agreements are non-cancellable but we will always endeavour to help you with any challenges you have regarding changes in customer demand. Agreements can be renewed.

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# Investment, sustainability, Brexit and more

*Speedboard explains how 15-years of investment in people and processes has prepared the company for drivers including 5G and electric vehicles*

The past 15-years have been exciting for Speedboard, with highlights including celebrating 35-years of manufacturing in 2018 and in November the same year becoming part of NOTE Group.

At Speedboard we view employee retention as critical to long-term success, ensuring customer satisfaction, increased product knowledge, satisfied co-workers and knowledge sharing. Three employees have 20-plus years' service; 27 have 10-plus years' service and 47 have over five years' service.

Everybody is valued and through integration with colleagues at NOTE's Stonehouse site and the wider Group, the company offers manufacturing solutions from multiple UK sites and offshore.

Digitalisation and the need to be constantly connected continues to grow, as does the integration of electronics in previously mechanical products. Millennials won't recall a time without Wi-Fi and social media.

Continuous improvement is key to Industry 4.0. Customers want to get the best out of the manufacturing processes.

They would like better and more: step changes in quality, efficiency and effectiveness. Companies need to think and plan about how they can get better, challenging the way they think and planning for the future.

UK manufacturing can't afford to stand still if it's going to deliver greater value to customers, improve productivity and remain competitive on the world stage. Transformation is crucial for the sector. Manufacturing is becoming increasingly more efficient, customised, modular and automated. NOTE is playing an active role in enabling this connectivity, laying foundations for improved efficiency, quality and capacity. The Windsor facility has expanded and continues to undergo extensive refurbishment, making significant investments in capital equipment over recent years.

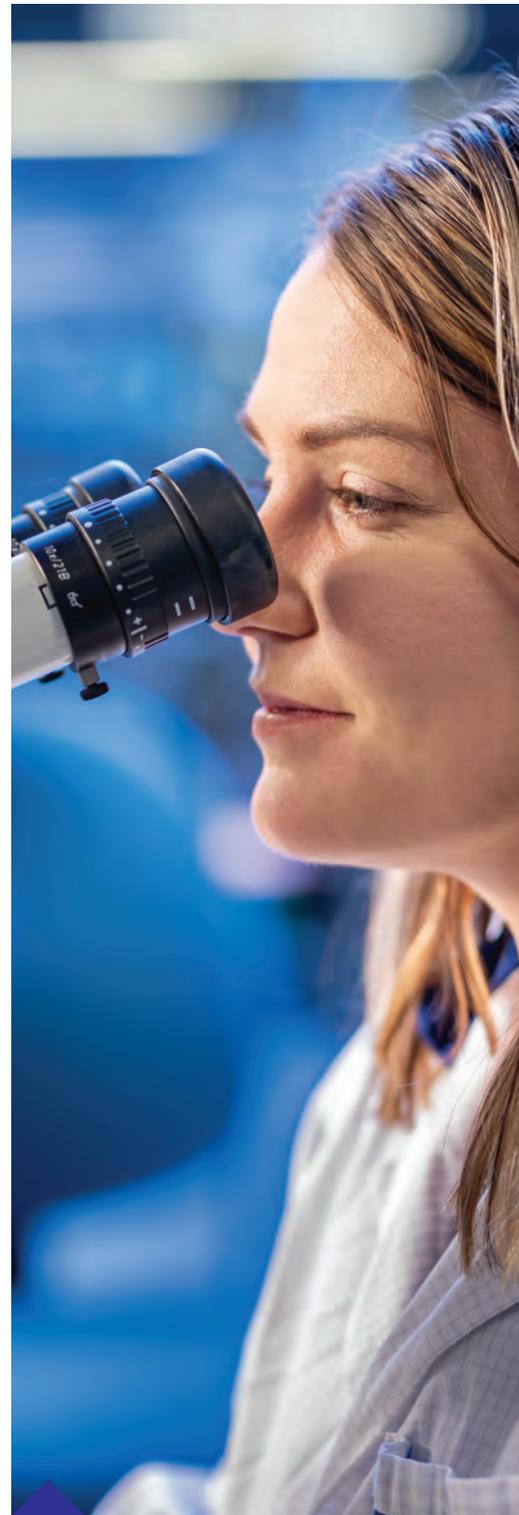
Sustainability is becoming more important and a significant and integrated component of NOTE's business activities, being one of the first companies in its sector to join the UN Global Compact and adopt its ten principles on human rights, labour law, the environment and anti-corruption. Speedboard achieved the ISO 14001:2015 certification in January 2020, joining the

rest of the NOTE Group.

The general slowdown in the electronic components market continues, but some specific sectors are seeing growth. Distributors are carrying high stocks of parts previously subject to long lead times due to a combination of factors including tariffs; the slowdown in the Chinese economy; trade wars; and now COVID-19. It's likely 5G and electric cars will drive the market towards another round of extended lead times and allocation.

Product availability and workable lead times can still be achieved with effective supply chain management and forecasting. However, with availability decreasing, effective forecasting is more critical than ever.

Prime Minister Boris Johnson delivered on his election promise to Get Brexit Done and London and Brussels have until the end of 2020 to hammer out an agreement on trade and other issues including security, energy, transport links and data flow. If they fail to reach a trade deal, the legal default will be a no-deal Brexit that would leave trade between Britain and the EU based from 2021 on WTO terms that would impose import duties and controls.



Every employee is valued



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# BETTER TOGETHER

Speedboard, now part of the NOTE Group, together with NOTE Stonehouse offer a gateway to offshore manufacturing solutions, strengthening our customer offering.

- Global network of manufacturing locations
- Local & central sourcing strategies
- Quality focused
- Strategic customer partnerships
- Committed to the success of our customers



MEDTECH



HIGH END CONSUMER



DEFENCE



INDUSTRIAL

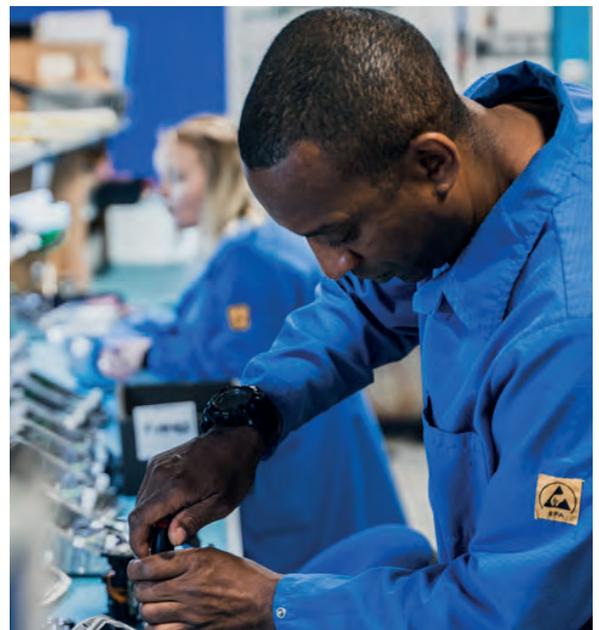


COMMUNICATION

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NOTE manufacture in the UK, Scandinavia, the Baltic states and China.



# Keeping things moving, then and now

*A lot has changed in 40 years but not Rochester's commitment to its customers and suppliers as a supplier of authorised solutions for the semiconductor industry*

**R**ochester Electronics was founded in 1981 by Curt Gerrish, an industry veteran having worked for over 20-years at Motorola Semiconductor. By 1981, the pace of change in the semiconductor industry resulted in a significant increase in end-of-life (EOL) components. Customers with long product lifecycles and a need for ongoing spares and repairs were met with increasing component obsolescence, often requiring costly re-design and requalification, if possible.

Curt identified the need to provide customers with an ongoing source of components following EOL using the original supplier authorisations ensuring a traceable, certified and guaranteed supply, particularly critical to customers with longer product lifecycles like hi-rel and industrial.

The model Curt envisioned ensured suppliers and customers receive the same level of product lifecycle service required to keep their

businesses moving. During the 1980s and early 1990s, Rochester continued to add supplier authorisations and increase its product offering. Today Rochester has over 70 supplier authorisations and the world's largest inventory of electronic components.

By the mid-1990s, Rochester added licensed manufacturing to its offering, providing an ongoing supply following exhaustion of original manufacturer finished inventory. A catalyst and milestone being the transfer of an Intel military product line. Ensuring customer quality and reliability, Rochester became ISO9001 certified in 1998.

The following decades brought rapid globalisation. New regional headquarters were built in the UK, Singapore and Japan. Shanghai, China was relocated and expanded, and new offices were established in Arizona, Munich and Chengdu. In 2017 Rochester released an online customer experience with e-commerce service and available content supporting seven languages.

This platform continues to transform meeting the needs of customers around the globe.

In 2006, Rochester launched an anti-counterfeiting awareness program promoting best procurement practices, combating counterfeit and substandard products and initiated the Semiconductor Industry's Association's (SIA) Anti-Counterfeiting Task Force (ACTF). It is an active participant today.

By 2007, the range of finished products increased to include active product lines for excess inventories. This enhanced its authorised distribution capabilities to support both EOL and active inventory, accompanied by additional die and wafer inventory receipts, allowing Rochester to become the world's largest die bank. In 2020, a third distribution centre is operational in Portsmouth, New Hampshire, US, a free trade zone.

Rochester's first Design and Technology office was established in 2008 in Rockville, MD providing

customers with in-house original device replication and form, fit and functional drop-in replacements guaranteed to the original manufacturer's technical datasheet with no software changes. In 2016, a second team was added in Burnsville, MN specialising in analog design capabilities.

As Rochester's customer reach continued to broaden, so did its portfolio of manufacturing services. Its hermetic assembly line was developed with QML certification to MIL-PRF-38535 and it achieved plastic assembly qualification. In-house testing services, already DSCC QML approved to MIL-STD-883, received QML Space Level Certification in 2007. A Rel testing lab with QML certification, archive, and analytical services were also added.



Rochester Electronics  
Tel: 01480 408400  
www.rocelec.com





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# KEEPING THINGS MOVING, THEN AND NOW.

For over 35 years, customers have trusted Rochester as their semiconductor lifecycle solution provider.  
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A WORLD OF ELECTRONICS

**COMPANY INSIGHT**

# Automated purchasing with a personal twist

*From its German HQ, Bürklin's offering ranges from component distribution and e-procurement to cable assembly, 3D print and more*

**B**ürklin Electronics is a pan-European, family-owned distributor of electronic components for industrial automation, robotics and process technology. The company can supply active and passive components, electro-mechanics, connectors, cables, wires, power supplies, batteries, tools and metrology equipment, plus IT, facility and home automation solutions.

Independent since 1954, the company currently offers more than 1.8 million products from over 500 OEMs. More than 75,000 products are permanently stocked at Bürklin's facility in Oberhaching, Munich, Germany.

With over 38,000 active customers, the company dispatches over 1,500 parcels, containing more than 6,000 products, every day. Orders placed before 18.00 are shipped same-day.

With availability displayed in real time, Bürklin's online shop lets users import order lists. Features include filter and comparison functions, single-piece orders, and product reference search.

Regarding e-procurement, electronic data interchange (EDI) via closed networks allows automatic transfer of order documents. An open catalogue interface (OCI) permits direct access via customers' ERP systems. An integration option is offered in customers' preferred B2B platform/marketplace.

Personal contacts are available for orders, enquiries and questions about the company's services. The company has multilingual capabilities to support customers worldwide.

Bürklin offers services including cable assembly, customer set assembly, 3D printing and calibration. Also available, free-of-charge, is a reeling service (from 100 pieces).

When ordering, customers enjoy advantages including: no small quantity surcharge; potential to procure articles outside the Bürklin range; parts-list processing; quotation service; delivery on a specific date; option to create standing orders; and full project support.



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[www.buerklin.com](http://www.buerklin.com)

# Setting the standard in contract manufacturing

*By investing and attracting high expectation customers, Tioga has grown from humble beginnings to 130 people and £16m turnover*

**F**ounded in 1996, Tioga has developed into one of the UK's leading contract electronic manufacturers. The heart of the company is its Derby-based manufacturing facility, located at the centre of the UK in a listed railway building. Over 15-years the site has been converted into an extensive electronic assembly plant covering 48,000ft<sup>2</sup>. The company has recently acquired a second manufacturing site close by, covering 12,000ft<sup>2</sup> of warehousing and manufacturing space for final box build production.

Tioga has invested heavily and continued to attract market leading, high expectation customers with a requirement to outsource all, or a significant part, of their product manufacturing requirements. In 2015, the decision was made to embrace the management of customers' products in their entirety from initial design through to ongoing manufacture and delivery of configured products to final end users.

Tioga covers all areas of electronic and electrical assemblies and achieves internationally respected

standards. Over the years the company has acquired: ISO 9001:2015; ISO 13485:2016; recently ISO 14001; and complies with the manufacturing standard IPC-A-160 Class 3, IPC 620 and IPC 7711/7721. An in-house training facility was created in 2019, used for developing staff and customers for continuity of quality standards.

From humble beginnings to 130 people, new investment worth £1m in 2019 and more in 2020, and a turnover of £16m, continued growth is planned targeting medical and high-end complex

assemblies. Tioga is moving forward with solid customer partnerships and continues to strive to provide an exemplary service to existing and future customers in its field of expertise: contract electronic manufacturing.



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# On-line or face-to-face: delivering the service buyers need

*Anglia explains its success rests on broad and deep customer partnerships through the whole product life cycle: concept, prototype, initial batch manufacture and full production*

Every project starts on a CAD screen somewhere, so an FAE team is usually the first point of contact between a customer and a distributor. A good FAE team can really make a difference: pointing designers towards devices that are the best technical fit and highlighting alternative solutions. Anglia's FAEs cover the full spectrum of electronic specialisms: RF, analogue, display, power and more.

Where customers' needs extend to schematics, code and PCBs, Anglia's Design Partner programme provides access to UK-based independent design consultants. Chosen for their experience designing for OEM and industrial applications, they can help accelerate customers' design cycles, often with expertise in specific areas.

As teams get projects started,

they often want to bench test different device options specifically within the design constraints. That's why Anglia created Ezysample, the 'no questions asked' free sample service for UK and Ireland customers. The service doesn't just offer free component samples, it also offers free development boards to support the design process.

In addition to recommendations on technical suitability, Anglia's market awareness and close links with suppliers allows it to provide valuable market intelligence. We help customers avoid the risk of designing in an EOL product by providing detailed availability information alongside the technical specifications on Anglia Live. In addition to product change notifications (PCN) and product termination notifications (PTN), the site includes pricing, live current

stock levels, stock due and expected arrival date, and supplier lead time. All of this is available even to customers who don't currently buy from Anglia.

Anglia can work from forecasts to manage inventory, cushioning against lengthening lead times or product terminations. The company can also offer buffer stock before a device gets withdrawn or changed, providing valuable extra months of supply. Many customers now use the Anglia 80/20 service, where they hold inventory and pay for it as they use it.

Anglia believes its online services should strengthen, rather than replace, the interpersonal relationship. Each Anglia customer has a personal contact at Anglia—someone to call with questions and challenges. This individual is located at head office and is in

close touch with the Field Applications Engineers and Key Account Managers serving that customer, ensuring a consistent, joined-up approach. Key responsibilities include regular pricing reviews and careful order book management to prevent delays or issues in the supply chain.

We see that *Electronics Sourcing* has produced a strong print magazine for over 15-years, a publication that it now complements with an excellent online presence. In the same way, the fantastic personal service that Anglia customers have always enjoyed is now enhanced by flexible online services and comprehensive marketing and technical information on Anglia Live. The two are key to a dynamic and productive partnership between customer and distributor and form the cornerstones of our service.



Each Anglia customer has a personal contact at Anglia—someone to call with questions and challenges

# Ready for smart homes, cities and factories

*Enclosure innovation is driving universal functioning products designed to serve multiple markets*

**A**s we enter the new decade, it is evident that IoT will drastically evolve and improve, with the continued implementation of smart homes, cities and factories. Cloud data, centralised control units and control technologies demand innovative electronic and electrical enclosures. Manufacturers must rise to these demands and remain at the forefront of new trends.

Multi-functional enclosures are in demand and CamdenBoss services this with universal functioning enclosures offering specifications and features

that serve multiple markets. Throughout 2020 and beyond, customers can expect plenty of exciting, innovative and industry defining solutions: watch this space.

Looking back, we can see how the company has changed. Modernisation and growth is evident when looking at the oldest enclosure solution, the BIM2000 series, and the latest, the 1500 series universal smart enclosure.

The 1500 series is purpose built for connected smart devices that require surface or corner mounting capability. Its unique shape and well-designed mounting

bracket, tackles issues faced every day by installers.

With environmental awareness becoming increasingly important, CamdenBoss continues to manufacture more of its products in the UK. Not only does this help reduce the carbon footprint, but also provides added benefits for the customer with shorter lead times and improved quality control.

Keep up to date with the latest NPI, standard enclosures or tool free solutions by following CamdenBoss' socials or subscribing to its newsletter.



1500 series suits surface or corner mounting



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# Global supply, local support

*Gelec's MD, Dave English, believes its success is underpinned by the confidence that local support offers UK manufacturers, combined with global reach*

With facilities in South-East London and the Far East, G English Electronics is celebrating 45-years. Initially established as a buyer and seller of surplus electronic components, the company developed and became a pioneer in sourcing components from Asia.

In 2020 the company is an importer and distributor of quality far-eastern manufactured components offering competitively priced products combined with local engineering support and customer service. Originally known for passive components, the product range has expanded to include custom design plastic and rubber mouldings and tools, fans, custom metal parts, loudspeakers, relays, wound components and much more.

Gelec works in partnership with its customers at each project stage, assisting with design-for manufacture, prototypes and mass production parts.

From its headquarters and recently extended main warehouse in London this second-generation family firm supports a wide manufacturing customer base both in the UK and globally, spanning consumer, industrial, broadcast, medical and security sectors amongst others and is now active in military.

In 2007 the company opened a China office in Shenzhen, having already established a warehouse and logistics centre in Hong Kong the previous year to provide flexibility and support to the increasing customer base in Asia and worldwide.

The company has invested in prototype manufacturing equipment at its London facility to support customer concept projects at early design stage. The equipment produces high quality, durable ABS models from customers' CAD data. Benefits include competitive pricing and fast turnaround. Gelec is planning to expand its UK engineering capability during 2020, and also support this capability by producing full models of customers' designs in China using SLA and other technologies.

Dave English said: "We aim to work in partnership with our customers. We are trusted advisers taking the risk out of sourcing in China. Manufacturing is fast paced, we understand the importance of being responsive, a vital aspect of any service industry. To succeed in any business, you cannot afford to be complacent and as suppliers to manufacturers we need to stay at least one step ahead.

"We make continuous investment in technology enabling us to offer a fast and efficient service and the ability to manage individual supply arrangements including buffer stocks and VMI. Our field sales engineers are supported by

an exceptional sales and engineering team providing technical advice and unrivalled customer service."

Gelec's reputation has been built on its ability to understand and meet its customers' needs. This has meant expanding areas of the existing product range and adopting new product lines. The company is a leading European distributor of Sunon fans and is also the exclusive UK agent for plastics supplier Win Industry and metal supplier Rungpeng.

English concluded: "We fully expect to be around for at least another 45-years. Our plans are that Gelec will continue to be a source of even more manufacturing solutions to meet the ever-growing requirements of the market."



**We aim to work in partnership with our customers. We are trusted advisers taking the risk out of sourcing in China**



GELEC  
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www.gelec.co.uk





ART is based in Essex, UK

# Quality comes from training

*Advanced Rework Technology's IPC Training and Certification is designed to help companies increase their quality and competitiveness*

Investing in IPC training and certification programmes helps companies demonstrate that they consider rigorous quality control practices important; meet the requirements of manufacturers that expect their suppliers to have important credentials; gain valuable industry recognition; and facilitate quality assurance initiatives that have become important in international trading.

Training alone may help with your quality initiatives, but when staff actually have an industry-recognised certification on industry standards, companies have the additional and extra credibility to help source new customers and contracts in today's ever-changing markets.

**Individuals can become certified to six key IPC standards:**

- IPC 6012, Qualification and performance Specification for Rigid Printed Boards
- IPC-A-600, Acceptability of (Bare) Printed Boards

- IPC-A-610, Acceptability of Electronic Assemblies
- IPC/WHMA-A-620, Requirements and Acceptance for Cable and Wire Harness Assemblies
- J-STD-001, Requirements for Soldered Electrical and Electronic Assemblies
- IPC-7711/7721, Rework, Modification and Repair of Printed Boards and Electronic Assemblies.

For manufacturers who build aerospace products or are working to gain contracts in this field, Advanced Rework Technology is the only Accredited IPC Training Partner (IPC Training Centre) in the UK authorised to teach both of the IPC Space Addendum training courses for J-STD-001 and IPC-A-620.

Advanced Rework Technology's MD, Debbie Wade, said: "Our training staff are highly experienced with every part of the industry from design, fabrication, through to assembly, quality and

inspection. This assists the trainer with every step of their teaching which makes our courses second to none.

"ART staff also dedicate their time to sitting on numerous IPC Standards Development and Training Committees. This gives us the added advantage and skills required to not just teach the latest requirements but fully understand changes to the technical standards and associated training courses. For our knowledge, skills and dedication, we are proud to be the recipients of many industry and IPC awards: in particular, recipients of the prestigious IPC Presidents Award."

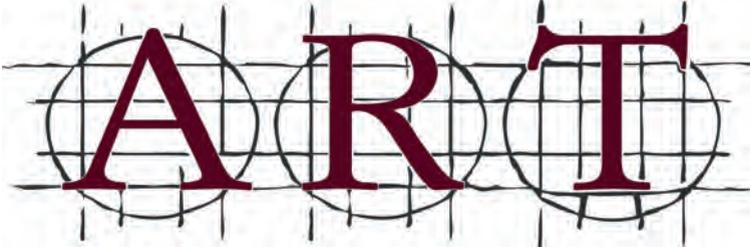
Even with the benefits of IPC Training and Certification programmes, some companies do not have the requirement within their supply chain or contractual agreements so Advanced Rework Technology is happy to work with companies to produce bespoke training syllabuses based around a customer's product and workforce. Alternatively, opt for one of the publicly available practical courses ranging from General Hand

Soldering Techniques to Rework of Surface Mount Devices.

All of courses can be presented at ART's fully equipped, state-of-the-art training facility in Essex. We appreciate for a large number of students this can be costly and impact production so all training courses can be presented on customers' premises.



Advanced Rework Technology  
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Advanced Rework Technology Ltd



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As an Authorized Training Center, A.R.T Ltd can offer Certified Training to the IPC Standards listed below. A.R.T Ltd are the only training center in the UK able to offer CID PCB Design and IP6012 training and Space Addendum training for J-STD-001 and IPC-A-620.



Acceptability of Electronic Assemblies



Requirements for Soldering Electrical and Electronic Assemblies



Repair Rework and Modification of Electronic Assemblies



Requirements and Acceptance for Cable and Wire Harnesses



Qualification and Performance Specification for Rigid PCB's



Acceptability of Printed Boards

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# Can't find the fault, take a closer look

*X-ray, optical and acoustic non-destructive analysis ride to the rescue when testing electronic components and assemblies*

**A** big issue in non-destructive inspection is getting a clear visualisation of the area of interest with sufficient resolution to detect the smallest faults. A straight 2D image could mask issues where the correct low angle image can see them easily. Equally CT isn't always the answer as the part in question may be in the middle of a large board. In this circumstance a high-resolution reduced angle CT could provide the required images. All these tools need to be available.

The Nordson Dage Quadra

7 system, with 100nm resolution, full CT and tomosynthesis capability, can image the smallest structures. Cupio's engineers are experienced in the analysis of these images and, if needed, reconstruction into 3D models.

For investigating to die level for bond wires or voiding/delamination in components, the Nordson Yestech and Nordson Sonoscan systems can measure bond wire height and check for die contamination using optical measurement and ultrasonics.

For customers tasked with identifying counterfeit

components in a supply-chain Cupio, offers both x-ray and electrical comparison.

Counterfeit detection at its best



“ ”

**Our inspection, measurement and test solutions are always designed with one single objective: to give electronics manufacturers fast access to significantly improved productivity, quality and profitability.**

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# Continuous investment in technology and automation

*Corintech's design and manufacturing resources sit alongside its own-brand Wi-Fi connected temperature and humidity sensors*

Established in 1977, Corintech offers specialist electronics design and manufacturing services including: PCB assembly; thick film hybrid production; coating and encapsulation; and mechanical assembly. While the company's core specialisms remain unchanged, its technical resources have expanded.

Since its inception, the company has been dynamic, investing in the latest production and inspection equipment to stay ahead of industry demand. Corintech's sites now house manufacturing equipment

including automated pick and place, selective soldering and automated optical inspection technology.

Initially operating from a single building in the New Forest, the purchase of facilities in the USA (1997) and Far East (2000) brought landmark growth for the company.

In 2014, Corintech established the trademarked FilesThruTheAir brand. This enabled the company to develop its own range of products, comprising Wi-Fi connected temperature and humidity sensors. This is a perfect demonstration of how Corintech's design capabilities

have evolved, utilising expertise in wireless and IoT, software and firmware development, and 3D CAD.

In 2015, Corintech achieved AS9100 quality accreditation. Operating to industry-recognised quality standards, Corintech offers every customer a high-quality service that meets the stringent requirements of the aerospace and defence industries.

Looking to the future, Corintech remains as competitive as ever, with long-term partnerships in many sectors. Over forty years of outstanding customer satisfaction,

alongside continuous investment in technology and automation, has established Corintech with an impressive reputation. Now, in a time where Brexit poses uncharted challenges to many businesses, Corintech remains confident that its long-term, steady growth will continue.



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## ELECTRONICS



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ELECTRONICS

# Supply chain solutions for ESD and cleanroom consumables

*Over the last thirty years, Antistat has diversified its product range, won awards, incorporated in the US and Germany and seen global reach extend to over 60 countries*

An agile nature has enabled Antistat to move the focus on sales and business towards the world's technical manufacturing hubs as these markets change and grow with technology advances and market demand.

Incorporated in 1987, Antistat began working with Marconi on radiation-hard silicon on sapphire wafer projects for space, defence and satcom. The end of the Cold War left the company looking to new markets which came in the form of OEMs with the boom in personal computers, mobile phones and consumer electronics. The business then evolved to support blue-chip clients in the global electronics, EMS, automotive and medical arenas, alongside the initial defence electronics customer base.

Antistat became a respected pan-European supplier of ESD production consumables. To maintain the pace of growth, the company looked to European diversification.

Cleanroom consumables were considered a good fit and sister company, Integrity Cleanroom, was formed.

In 2016 Antistat incorporated in the US, basing itself in Texas having established key distributor agreements and its own warehouse. Long-established partnerships with good haulage and logistics providers lets Antistat service its European and US activity with back office support from its UK HQ. The company is seeing 20 per cent year-on-year growth across the business.

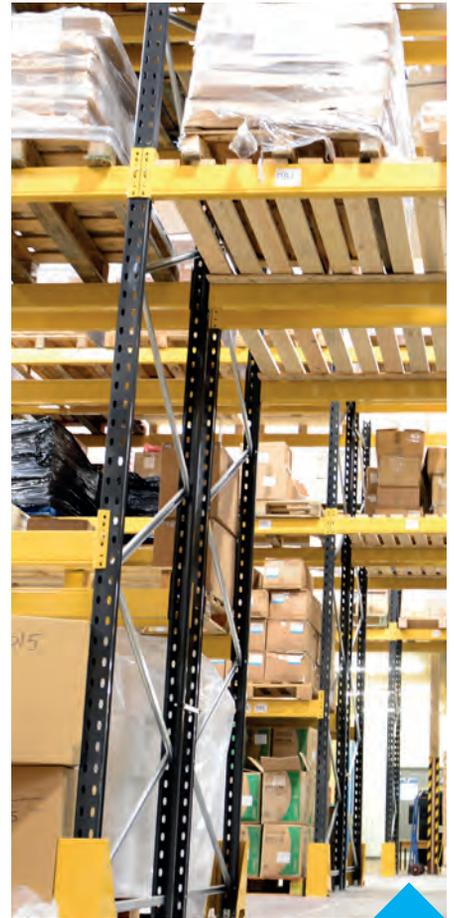
The company states that core to this success is customer focus. Antistat has always supplied solutions for satisfying just-in-time supply chains for advanced manufacturing businesses. It listens to what customers need and evolves processes and the supply chain to deliver products worldwide: right product, right place, right time.

With newly launched US supported websites, e-commerce is an enhanced cost-managed pathway to

exports. Fluent in Chinese, German, Spanish, Italian, French, Slovakian and Polish, staff can speak to their main markets in their native languages.

Antistat works with customers on: reductions in component purchase spend; inventory management; carriage and supply chain management costs; rationalised supplier bases; single point supplier contacts; same-day/next-day and timed delivery; streamlined documentation processing; and ongoing cost saving alerts.

Electronics is one of the fastest moving industries and as the company builds on its success the global opportunities are excellent. It is not without its challenges, but commitment to constant growth and team members, through training, innovation and personal development, plus a focus on quality and product curation, places Antistat at the forefront of delivering on its own objectives and its customers' objectives too.



Antistat supports just-in-time supply chains



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## COMPANY INSIGHT

# Delivering consistent positive solutions

Part of Cleveland Technologies Group, North East-based PCB supplier, Cleveland Circuits, was founded in 1972 in response to the need for quality, custom manufactured PCBs serving both the wider business market and sister division Weyfringe Barcode and Labelling Systems.

Over the last 15-years the company has faced a range of challenges such as global financial systems, political standings and shifting local and worldwide attitudes. Cleveland Circuits was not immune to these effects however, through ongoing investment in our people, machinery and the

shared vision of our staff, the company continues working closely with suppliers and customers to deliver consistent positive solutions.

With synergies shared with its sister division, Connect-2 Technology, Cleveland Circuits is uniquely placed to offer a complete turnkey service comprising PCBs through to completed box build and final assembly ready for market or inclusion in larger machinery.



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## COMPANY INSIGHT

# From garage life to global operations

Formed in 1977, Lascar Electronics started life in a garage in Essex, England, designing and manufacturing a range of digital panel meters and complementary power supplies. In 1980, with sales showing significant growth, the company moved from Essex to its current location in Whiteparish, where its headquarters are still located.

In 1994, the company extended its current range of digital displays and power supplies with the introduction of its first EasyLog data logger.

Then, in 1997 the company opened its first direct US operation in Savannah, Georgia and in 2002 relocated its facility to Erie, Pennsylvania where it still resides.

The company consolidated its

manufacturing and procurement departments in 2010, with the purchase of an office in Kowloon, Hong Kong, where the company directs its manufacturing and quality facilities.

In 2015, Lascar opened a dedicated global distribution centre in Salisbury, England, where parts are shipped to customers and distributors across the globe.

Today the company operates from four direct global sites in the UK, US and Hong Kong supplying product directly to customers throughout the world and through its network of over 100 global distributors and resellers.



Lascar Electronics  
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[www.lascarelectronics.com](http://www.lascarelectronics.com)

## COMPANY INSIGHT

# A drive to invest

*Growth at WPS is driven by customer demand, automation, investment in equipment and people, and delivery of high quality, flexible services*

**A**s Electronics Sourcing celebrates its first fifteen years, Wilson Process Systems enters its fifth decade. Over this time it has transformed from a bare PCB manufacturer to one of the largest electronics manufacturing service providers in the South. Over the last 15-years WPS has seen continued expansion and investment, resulting in a steady increase in year-on-year turnover.

In 2006, expansion was necessary as the company's main production site had become a limiting factor. WPS acquired a second factory as a dedicated surface mount facility. This houses five surface mount lines, with a total capacity of almost 250,000 placements per hour, plus fully automated assembly of PCBs up to 1,300 by 500mm. The latest acquisition is a Universal Fuzion OF 1-11 odd-form machine which handles surface mount and odd-form components including through-hole connectors, sockets, transformers, heatsinks and RF shields.

Other additions include: two automated conformal coating lines; 2D/3D automated optical inspection; high-speed selective soldering; and environmental test facilities. A suite of conventional technology equipment is available for customers with through-hole boards.

Over the past 15-years WPS' customer base has remained loyal, underpinned by the company's objective to build long-term, proactive partnerships with its clients.

Coronavirus has come as a stark reminder of the volatility

and insecurity of the global economy, prompting interest in home-sourcing as a contingency plan. The flexibility, agility and responsiveness provided by a well-funded, UK based, family enterprise will be key in ensuring a sound foundation for WPS in the future.



WPS' surface mount facility features five lines

## WILSON

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# WILSON

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## Local support from a global organisation

*PCB specialist, Fineline VAR, introduces readers to benefits ranging from an extensive audited supply chain to technical support*

**F**ineline VAR, the UK subsidiary of Fineline Global has been flying high since its acquisition in October 2016. With a turnover in excess of £15M per year, Fineline VAR is one of the UK's leading suppliers of printed circuit boards.

Working with many blue-chip electronics EMS and OEM companies, on a local and global basis, Fineline's customers gain the advantage of a local PCB supplier, but with the advantages of a global company. Benefits include: extensive audited supply chain; logistic agreements; purchasing power; advanced IT systems; and market leading technical support and service levels.

In addition to the UK, Fineline has operations in US, Asia, Israel and main European regions. Fineline supplies products to over fifty countries and has the logistic solutions to support this.

Fineline is a PCB partner who can truly support a local and global customer base.

Benefits Fineline can bring include: advanced technical support in all areas of PCB supply; full VMI and logistic solutions; a proactive approach to commercial solutions; the advanced systems and methodology that a global company can bring; and value engineering to ensure not only design for manufacture but also design for cost.

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Email: kalie.miller@fineline-global.com

Les Morgan  
Tel: +44 7768 382640  
Email: les.morgan@fineline-global.com

Our Locations: Harrogate, Calne

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## COMPANY INSIGHT

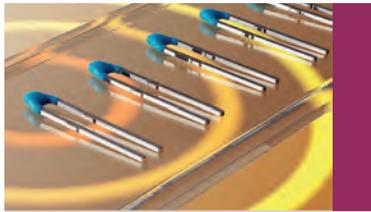
# Reap the benefits of distribution

**T**hermal control or protection is often one of the last considerations of any new product development project, so when time and expertise is under pressure, it pays to call on the resources of a distributor.

ATC Semitec offers customers a valuable resource during new product development or product upgrade. With a wide range of thermal components, from world-wide manufacturers, there is a lot to select from.

Staff are available, at the end of a telephone, to provide personal and considered advice. Also, using in-depth knowledge of their product ranges, plus the breadth of industries into which they supply, they can recommend the best fit for each application or budget. Bespoke options, lead times and pricing are taken into consideration.

Finally, in uncertain times, distributors like ATC Semitec are well placed to use their long-established supplier relationships to ensure forecast orders are delivered on time.



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## COMPANY INSIGHT

# A history of connectivity

**N**orthern Connectors was established over 35 years ago by husband and wife team Keith and Linda Hewitt. From humble beginnings trading from a small unit in St Helens with initially just the one franchise agreement, the business has grown to become a celebrated and successful company representing over ten of the industry's top connector manufacturers.

Northern Connectors remains a family run business with first and second generations involved in the day-to-day running of

the company. The passion and expertise that runs through the whole of Northern Connectors is a key element to the company's success and has led to many long-standing relationships with suppliers and customers alike.



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## COMPANY INSIGHT

### CEM partnership

In business for 40-years, IEW and has over 60 employees providing a high level of service in the contract electronics manufacturing market. The company is dedicated to providing services to companies that produce complex machines. The aim is to delight these customers by understanding their exact requirements, then tailoring the service offered to meet their needs so they can focus on completing their technology led products and innovating future designs.

IEW's goal is to offer a cost-effective solution, delivering finished assemblies on time and fully tested to ensure the highest quality and reliability.

The company's vision is to grow its business by continuing to build a national reputation as the number one supplier for: delivering the exceptional; understanding the complex; and innovating our service to meet the requirements of a constantly evolving electronics marketplace.

IEW's mission is to service the complex needs of our electronic manufacturing customers today so they can focus on delivering the technology of tomorrow.



IEW  
Tel: 01793 694033  
www.iew.co.uk

# Managing obsolescence

*IIOM's CTO, Ian Blackman, explains how the organisation's membership ranges from aerospace and automation, to oil and gas*

**I** IOM started in the United Kingdom as the Component Obsolescence Group (COG) in 1997 and now has Chapters in Germany, India and USA, plus the UK. Members come from all industry sectors and all levels of the supply chain. Members include asset owners and operators of systems and equipment; manufacturers of systems; equipment and components; and obsolescence solution providers.

The management of obsolescence and assessment of obsolescence risk is becoming familiar to sectors that previously did not engage in the discipline. Our members come from sectors such as aerospace, automation, automotive, defence, marine, nuclear, oil and gas; and rail.

IIOM members were involved in the development of the new version of IEC 62402:2019, issued in June 2019, and IIOM has produced guidance booklets on various aspects of obsolescence management.

IIOM's regular member meetings provide a mix of formal presentations and informal events at which

obsolescence engineers, buyers and solution providers can exchange ideas on

key issues such as REACH, conflict minerals and counterfeiting.



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# Ethos of continuous product development

*How innovation and continuous improvement underpin the future of electronics technology*

2020 marks the 75th birthday of the Harting Technology Group. From the beginning, the focus was always on developing high quality products and continuous improvement. To celebrate 15 years of *Electronics Sourcing*, we're looking back on some recent innovations and ahead to the future.

A major development of the last few years has been the onset of Industry 4.0, a revolutionary process of digitally connecting manufacturing operations. By enabling devices to interact, it is possible to generate useful production data, which offers many business benefits.

Harting recognised the importance of Industry 4.0 and back in February 2016, launched its Mica edge computing platform. This solution was developed to provide a quick and easy method of implementing digitalisation projects at facilities.

The system lets manufacturers access information from machines, such as energy use and cycle times, and combine it with production figures. Once this information is unlocked, users have a better understanding of what's happening on the shop floor, allowing them to develop strategies for efficient production and predictive maintenance.

Another trend is miniaturisation. As sensors, cameras and automation equipment get smaller, they need a power increase to meet expanding data, signal and power requirements. In

response, Harting released the ix Industrial Ethernet interface. Its PCB jack is 70 per cent smaller than an RJ45 socket, allowing easy incorporation into smaller devices, while providing a significantly higher packing density.

It's not just product development where the company is offering new technologies and innovative ideas. MyHARTING is a digital project and partnership area with a range of tools. For example, users can download and store CAD files, technical data and whitepapers and apply for an eShop upgrade, which allows them to check pricing and stock, place orders and track deliveries.

The site also gives access to the innovative Han Configurator, an online tool where users can design and build a connector to their exact requirements. Benefits include an onscreen 3D visualisation of the design, meaning it can be viewed from a range of angles. It's also easy to download all documentation (including STP files) and quickly save, load and share the configuration within a team.

Looking at future developments, Single Pair Ethernet (SPE) is a new technology with immense potential. Until now, industrial Ethernet has only been able to reach the control level before it needs to switch to BUS systems via gateways. SPE, delivered via Harting's industry standardised T1 Industrial connector, brings Ethernet from the cloud to every sensor.

As sensors, actuators and network nodes can be

networked and supplied with power via T1, there are numerous applications in automation technology, robotics, machinery and plant manufacturing and transportation markets.

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# Then and now

*In this article, Europartners' managing partner, Aubrey Dunford, looks back at the European component market in 2004 and compares it to the market in 2019*

A lot has changed in the market over fifteen years. What are those changes and what do they tell us about the future trends in the European electronic components distribution market?

2004—The dotcom bubble had well and truly burst but for the European electronics market the effects of the drastic downturn were still causing waves and great uncertainty. The last years of the old millennium had seen a huge upswing in the electronic components market in Europe, primarily driven by the arrival of 'digital' technology. GSM had arrived and mobile handsets had moved from the business world into a mass consumer product. Not only the handsets but the infrastructure needed drove component demand up.

In the computing sector Y2K and the arrival of the second wave of the home PC were adding to the demand. Like the dotcom bubble the electronic components market also burst. The European Total Component Market (TAM) had peaked in 2000 at €60B. By 2003 it had fallen back to €41.6Bn which, in reality, was almost the same level as 1999 but for many companies the investments made to meet the boom had not been recovered.

After three years of decline, 2004 was the first year of market growth. Overall, over the 15-years since then the market has grown by an average of 2.6 per cent. The financial crash of 2008 caused a major decline in the market in 2008 and 2009 but the market recovered in 2010. The other two years of decline were 2012 and 2019,

both caused by the same effect triggered by different events.

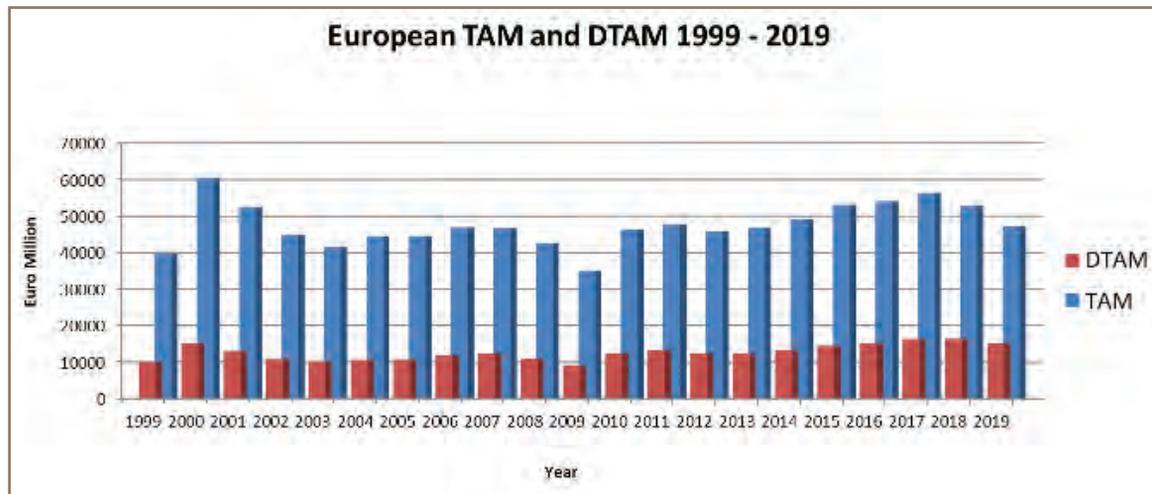
Years in which demand outstrips supply lead inevitably to an increase of stock throughout the supply chain. However, as the demand and supply come back into balance there is a downturn in the market as the excess stock within the supply chain is used up. In March 2011 the trigger for the demand outstripping supply was the Japanese earthquake and

as automotive and 5G telecommunications caused a global shortage in some products, especially commodity products where low market prices had led to little investment in capacity. This again triggered an over stocking of the supply chain which has been corrected by a fall in the market in 2019.

However, although the market over the past 15-years may have shown an overall consistent growth, the distributors servicing that market have undergone

2003	2019
Arrow	Avnet/ Farnell
Avnet	Arrow
Abacus/Rutronik	Rutronik
Memec	Future
Eurodis	TTI
Future	Electrocomponents
Electrocomponents	Digi-Key
Farnell	Mouser
Acal	Acal
Advanced European	Ineltek

Table 1: A lot of changes over the past fifteen years



The total electronic component market and the share serviced by distributors

tsunami, and the resulting nuclear disaster. Japan is a key source of materials used in the production of many electronic components in semiconductor, passive and electro-mechanical segments and it was fears of disruption to the supply chain which caused an overstocking effect which exaggerated the market in 2011 and the subsequent fallback in 2012.

In 2017 the rise in global demand for electronic components accelerated particularly in China as many applications such

major changes in that time. Table 1 shows the top ten companies ranked by European Sales of Electronic Components as estimated by Europartners in 2003 and in 2019. The changes in the names and positions on this table show the key market dynamics of the past fifteen years.

As mentioned, in 2004 all distributors were coming to terms with the dramatic fall after the 2000 boom. Many were seeking to cut their costs and increase the services they could

**“In 2017 the rise in global demand for electronic components accelerated particularly in China”**

offer by sharing resources and a number of alliances were being discussed and formed. The two biggest were Abacus/Rutronik and Eurodis/World Peace Group. Also within the top 10 were Advanced European which was formed in June 2002 and was an alliance consisting of 2001 (UK), Alcom (Benelux), Comprel (Italy), Computer Controls (Eastern Europe), Hy-Line (Germany), Matrix (Iberia) and Micropuissance (France), and the Advanced Technology Group (ATeG) which consisted of GD Technik (UK), Ineltek (Germany), Anatec (Switzerland) and Anatronik (Iberia).

These new alliances were not mergers or acquisitions. The companies continued to go to market in their own name and maintained their own management. However, the strategy was to co-operate to the common benefit of the group. It was hoped the model would be attractive to suppliers who wished to maintain a more 'local' approach to the market whilst reducing the number of distributors they needed.

These alliances did not ultimately bring the benefit that was hoped for and all of them ceased. Rutronik continued and has maintained its position as number three in Europe and over the past one and half decades has grown its share of the market.

Eurodis is the only top ten listing of 2003 that did not survive, being forced into bankruptcy in July 2005. World Peace Group has continued to grow by concentrating on the expanding Asian markets but has not made further attempts to become a European player. One of the most striking changes was the growth of Avnet—to a large extent from acquisitions. Abacus acquired Deltron before itself being acquired by Avnet which also acquired Memec, Betronik and others such as MSC Technologies.

In 2018 Avnet acquired Farnell, although under the Avnet business model, Farnell has continued to trade as a separate company.

Accounting for these acquisitions Avnet's market growth has been from around 20 per cent in 2003 to nearer 30 per cent in 2019. Arrow has also grown although not as much through acquisition of European companies, although it did acquire Distar and Holz in 2004.

The most significant change during this time relates to the internet. In 2003 two of the top ten were catalogue distributors: Electro-components and Farnell. In the intervening years this segment has been transformed by the internet. Big printed catalogues were replaced by websites that allow search, availability, pricing and technical information. Even the term 'catalogue' has been replaced by 'high-service'.

They have been joined in the European Top Ten by two American companies whose names are now familiar: Digi-Key and Mouser who were not known in Europe in 2004. Mouser is working alongside its sister company TTI which is the fastest indigenous growing company more than

quadrupling European sales over the time.

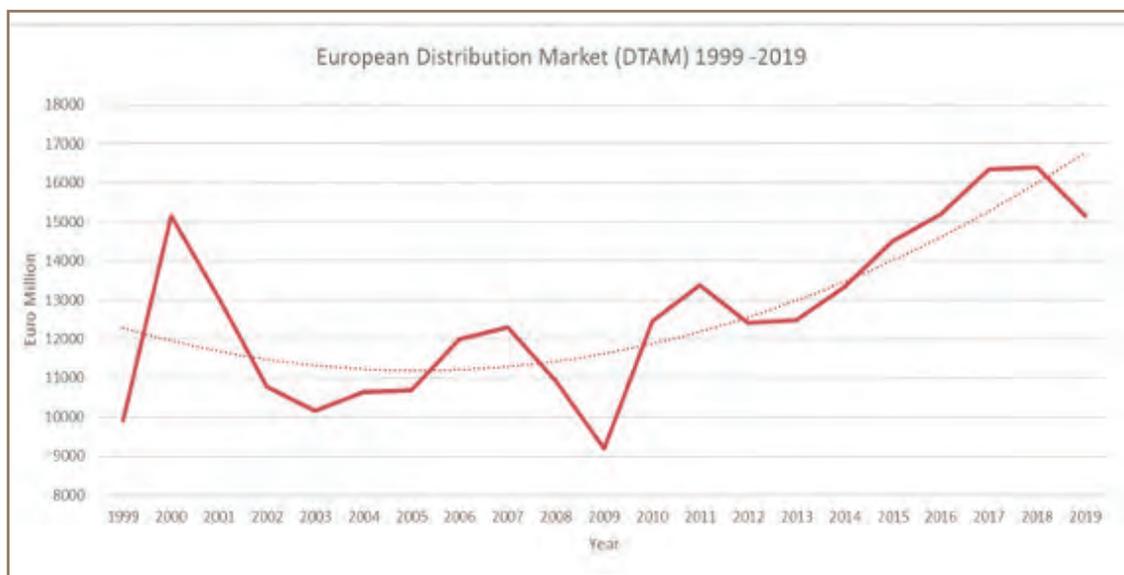
So, what can all the changes we have seen since those first editions of *Electronics Sourcing* tell us about the future?

Firstly, despite all those who say electronics has gone to Asia and developing countries, the explosion of electronics in every aspect of our lives, plus the future challenges regarding robotics and energy management, will ensure the European electronics industry will grow. European growth maybe not as spectacular as other regions but there are many industries which would like to see the consistent growth that electronics has shown.

What looking back over the past fifteen years does tell us is that no company can stand still. Companies must adapt quickly to changing markets. Those who want to remain in this market will need to be constantly finding new ways to service customers and bring value to existing suppliers and new suppliers of new products that new applications demand.

On one side some component manufacturers are starting to question the value of the traditional distribution

model, on another there are companies, such as Amazon, who have extremely efficient and developed distribution processes. Regulation and the passing of information along with products continues to grow, especially in European markets, along with the need for companies to consider the environmental impact of every part of the business. Only companies who meet these challenges will be in the top 10 list in 2035.



In the past 15-years the market has grown by 2.6 per cent pa

# Electronic Components Supply Network: 1970 to 2020

*In this article ecsn's fourteenth chairman, Adam Fletcher, congratulates Electronics Sourcing on its 15th Anniversary and provides an historical perspective on the Association's development, its international role and wonders what the next fifty years will bring*

In June this year the Electronic Components Supply Network (ecsn) will have served its members and the wider UK and Ireland electronics industry for fifty years. Reaching its Golden Jubilee' is also quite an achievement.

Over this period ecsn was served by a number of eclectic industry figures as chairman. The initial intention was a revolving annual chairmanship with Roy Atterbury as secretary. George Stewart (SASCO) was first followed by Waldo Thorn (Celdis), Tom Jermyn (Jermyn Industries), Bill Richardson (Semicomps), Keith Pierson (ITT ESD), Alf Rose (DTV) and back to Waldo Thorn. In 1977 David Carter (Semiconductor Specialists) took the helm, succeeded by John Walker (Compstock), Peter Huggins (GEC Semiconductors), Brian Murdoch (ITT ESD), Norman Weisbloom (Swift-Sasco), Tony Manning (Semiconductor Specialists), and back to John Walker (Compstock). So twelve chairmen in fourteen years, each of whom put their stamp on the association and helped establish its role in the industry. In June 1988 the association appointed Gary Kibblewhite as its ongoing Chairman.

Despite all the mergers and acquisitions over the last fifty years the founding members remain members and more than half the current membership have been members for over twenty years.

Over the past fifty years ecsn has sought to promote positive collaboration throughout the electronic components supply network to benefit its members and the economy on the basis that the provision of useful, timely, information and statistics results in an improved competitive advantage for all. Ecsn remains a member managed, not-for-profit organisation open to all in the electronics industry interested in electronic components from cradle to grave and re-birth.

Ecsn was an early example of a virtual organisation and

remains so as it has no direct employees or offices but a small number of contractors, including the chairman who primarily have fulltime industry roles and support the association's activities alongside these. Most organisations recognised the value and competitive advantage that membership of the association could bring and were delighted to have their staff involved in its operation. The virtual structure enabled variable costs to be deployed based on agreed need and finances and minimised direct overhead costs making the organisation lean and efficient.

Left to right: Adam Fletcher, Roy Atterbury and Gary Kibblewhite



Roy Atterbury, a wonderful wordsmith whose career extended from *The Times Literary Supplement* to *Electronic Components* was inspired to set up an industry organisation on finding that many struggled to deal with forecasting demand in a rapidly growing but wildly cyclical electronic components market.

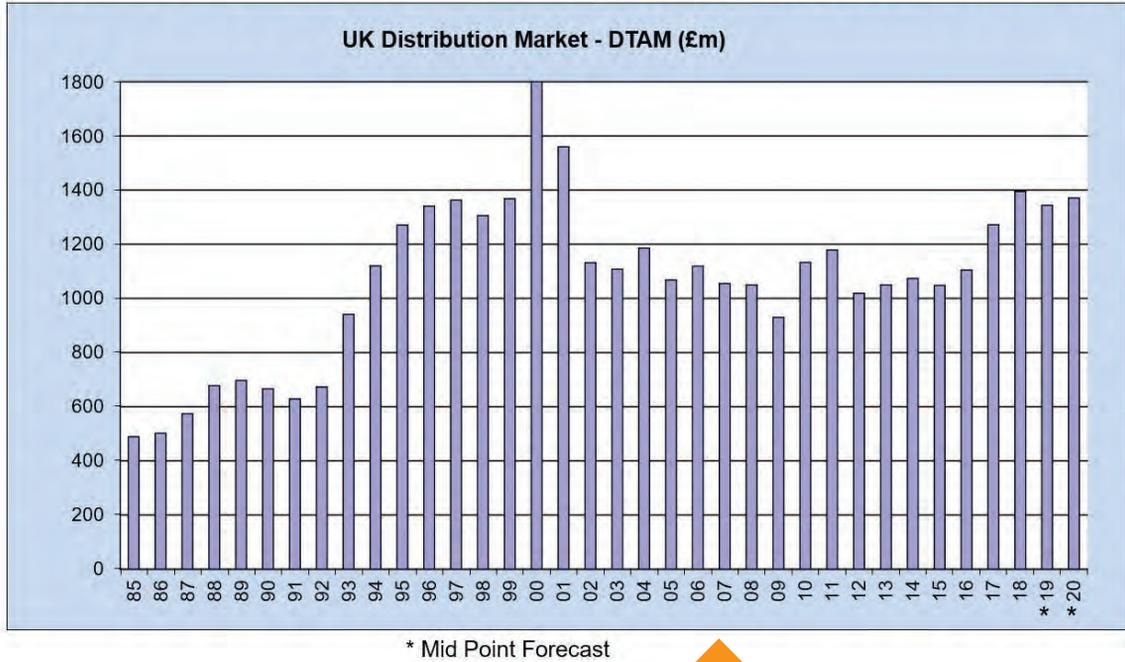
In March 1970 Roy invited the 'great and good' from the electronic components industry to a meeting at the Tower Hotel in London, where an agreement was reached in principle to establish an industry association. On 1 April 1970 a nucleus of 21 organisations, including Arrow Electronics, Avnet EMG and Farnell were the association's founding members, who continue to support the association today. In 1971 Roy published the first set of industry statistics, provided by its members, that enabled many organisations to gain a wider insight into what's really happening in the market.

Popular cars in the electronics industry in June 1970 were a range of Ford Cortinas for sales folks, Corsairs for middle management and Zodiacs for executives. It's interesting to consider that the most complex electronics products in these cars were the push button radios, which were an optional extra in most models except the Zodiac.



**Popular cars in the electronics industry in June 1970 were a range of Ford Cortinas for sales folks, Corsairs for middle management and Zodiacs for executives**

## UK & Ireland Electronic Components Distribution Market



**UK and Ireland Electronic Components Distribution Market 1985 to 2020**

Over this period Aerco, Solid State Supplies, Microchip, TE Connectivity, AVX, Panasonic, Murata, Anglia, Molex, Gelec, TDK and Harwin, along with many organisations that have almost certainly been consolidated into these and other organisations, became members and supported the association.

Roy remained honorary secretary until he retired in May 2005, having served the association for over 35 years, quite a remarkable commitment to the UK electronics industry.

Gary Kibblewhite, the second chairman, was an industry executive rather than a journalist, starting his career at ITT Cannon, then onto Belling and Lee before re-joining ITT Cannon as European marketing director, then joining Lex Group's European operations becoming UK managing director of Lex Electronics in 1987.

Kibblewhite presided over exciting times in the electronic components industry, which continued to be on a high growth trajectory punctuated by

the occasional economic recession that only mildly impacted the industry's growth as can be seen on the graphic *UK and Ireland Electronic Components Distribution Market* for the period 1985 to 2020.

In the 1990s the UK's greater role within the European Union also opened new opportunities for electronic components manufacturers with many organisations now needing to extend their reach into many of the leading European customers. This led to a great deal of consolidation as organisations began to scale up their European operations by acquisitions. Those organisations consolidated included many industry stalwarts like: Abacus-Polar, Eurodis, Celdis, Compstock, Deltron, Flint, Gothic-Crellon, Hawnt, Memec, Radiatron and Townsend Coates, to name just a few ES readers may remember.

Kibblewhite recognised that the electronic components industry was beginning to globalise and in 1986 he established the International Distribution of Electronics Association (IDEA), an

umbrella organisation or 'association of associations' that brought together all of the local country trade associations to share information and industry best practices. Almost all local country electronic components associations became members of IDEA.

During this period the company cars of choice where the Ford Sierra or the Vauxhall Cavalier for sales folks, Granadas or Carltons for middle management and the Audi 100 and BMW 5 series for executives along with the odd Jaguar XJ6. The electronics in these cars was still fairly basic, they now had radios as standard and some could have CDs with multichangers but beyond some very limited electronic control for windows and primitive engine injection management systems they still contained little electronic content. However, most company cars now had car phones retrofitted, hugely increasing their electronics content!

Over this period Renesas, Broadband Technology, Harting, Omron Electronics, Acal, TTI, America II, Astute, Vishay, APC, Rapid Electronics and RS Components and many other organisations joined the association.

Kibblewhite recognised the importance of the rapid rise of the Chinese electronics market and his final endeavour for electronic components industry was the establishment over a three-year period of the Chinese Electronic Distributors Association.

After twenty years' service to the association, Kibblewhite passed the baton to the current chairman, Adam Fletcher in May 2005.

Fletcher said: "It has been my pleasure to serve as chairman of ecsn, a role that has been likened to 'herding cats' because whilst you have

some authority you have limited direct influence over the actions of members, that perhaps you would in a more conventional organisation. Fortunately, ecsn has a strong Leadership Group comprising over thirty senior industry executives whose role it is to guide the organisation and set its objectives. I would like to thank all those who have given their time and expertise over the past fifty-years supporting ecsn and particularly Steve Rawlins, CEO, Anglia who has served on ecsn's Leadership Group for over 18-years.

"I've used the development of the company car as a metaphor for the growth in the use of electronic components and systems over the last fifty-years. Modern cars are now rapidly becoming networked computers on wheels, where the electronics content is becoming the highest value element. It matters little today whether you have a basic or a luxury model, the electronics content of cars, like the ubiquitous use of electronics in our society, continues its relentless growth.

"Ecsn has and continues to successfully help its members and the wider electronics industry navigate the multiple challenges that come our way every year which can range from 3D barcoding, counterfeit avoidance, new legislation, demand and supply issues to major catastrophic events. We achieve this through collaboration between members, industry and government departments by the sharing of information and best practices. The economic and health impacts of the current Coronavirus epidemic is a great example of this collaboration in action, to provide accurate and timely information to the UK and international electronic components markets.

"And the next 50-years? The honest answer is that really,

I don't know what the next fifty-years will bring other than a lot more change. I am however fairly certain that electronics will be playing an even bigger role in the lives of citizens and that someone in marketing will no doubt name a transport mode the Cortina and that it won't be anything like the cars we drove in the 1970s.

"I remain confident that an ongoing closer collaboration between all parties in the electronic components supply network, with an honest mutual sharing of business intelligence will improve the outcomes for all parties. Please ensure your organisation is playing its part."



**I've used the development of the company car as a metaphor for the growth in the use of electronic components and systems over the last fifty-years**

**Adam Fletcher is chairman of the Electronic Components Supply Network (ecsn), a business association established in 1970 that today offers support to all organisations with an interest in electronic components throughout their entire lifecycle. He is also chairman of the International Distribution of Electronics Association (IDEA), an association of individual country electronic components associations whose objective is to share best industry practice.**



# Consistent technical and commercial support

*With its motto 'committed to excellence', family-owned Rutronik has transformed its European business into a global player*

Over the last 15-years, Rutronik has doubled its workforce to over 1,900 people, while annual turnover is almost €2B. During this time the company established Rutronik Inc, which serves the North American market, while the Asian subsidiary with seven offices in China, Hong Kong, Taiwan and Thailand supports customers in Asia. This lets Rutronik offer consistent logistical, technical and commercial assistance wherever it is needed.

Over the years, Rutronik has established close, long-term relationships through continuous collaboration with manufacturers and customers. Rapid decision-making processes and flexibility are important criteria that lets Rutronik work efficiently and respond to individual customer needs.

A core competency is technical consulting. With an established team of sales staff, application engineers and product specialists, questions about its product portfolio can be answered on technical and business levels.

Rutronik's broadline portfolio covers OEM requirements including semiconductors, passive and electromechanical components, plus embedded boards, storage technologies, displays and wireless products.

Customised and intelligent logistics systems are designed to ensure an error-free and reliable flow of goods. A coordinated warehouse configuration helps cut procurement costs. Regarding

Rutronik's commitment to quality, it focusses on safety, risk management and environmental protection. For example, certified ESD protection and dry pack packaging ensure components arrive undamaged.

There are four elements to Rutronik's digital transformation that influence and redefine all business models and processes. The acquisition, processing and analysis of digital data lets businesses forecast better and make reliable decisions, especially with complex systems and correlations.

Secondly, the combination of traditional technologies and artificial intelligence (AI) based on neural functions is leading to self-learning, autonomous operating systems that can even organise themselves in their work environment.

Connectivity also plays an important role in today's business. Synchronisation and uninterrupted communications within the supply chain and production locations help cut production and delivery times. Shortening innovation cycles and reducing time-to-market is also important.

Lastly, direct access to customers via all media, supported by the mobile internet, opens up maximum market transparency and is a perfect support for new business models and services. These are the critical factors within Rutronik, a journey it started a long time ago.

Rutronik directs its products, services and logistics offerings towards supporting and helping define its

customer's and associates' digital transformation. Activities at Rutronik Smart, Embedded, Automotive and Power are synonymous with the company's innovative strength.

Rutronik's evolving logistics remains another fundamental pillar of the company's success. Supplying worldwide, via its three logistics centres, the company guarantees short delivery times, quality and flexibility.

The company's warehouse management system is internationally standardised and all storage processes are digitally visualised. This enables instant access to every order or, in urgent cases, manual prioritisation. Whether individual delivery plan, consignment or Kanban systems, Rutronik provides customers with know-how. Additional services such as extended label information, industry specific processes (eg VDA compliance), customer-specific packaging solutions, safety reserves, barcodes, traceability and more form the company's tailored system. All of these automated processes combine to reduce procurement costs, simplify and speed up processes and secure supply.



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# Happy Birthday!

Rutronik congratulates Electronics Sourcing to their 15th anniversary.

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