



The European Institute for the PCB Community

## EIPC SPEeDNEWS

*The Weekly On-Line Newsletter*

*Issue 22 – July 2023*

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### ARTIFICIAL INTELLIGENCE NEWS

#### **More than a quarter of jobs in the OECD rely on skills that could be easily automated in the coming artificial intelligence revolution - OECD**

PARIS, July 11 (Reuters) - More than a quarter of jobs in the OECD rely on skills that could be easily automated in the coming artificial intelligence revolution, and workers fear they could lose their jobs to AI, the OECD said on Tuesday.

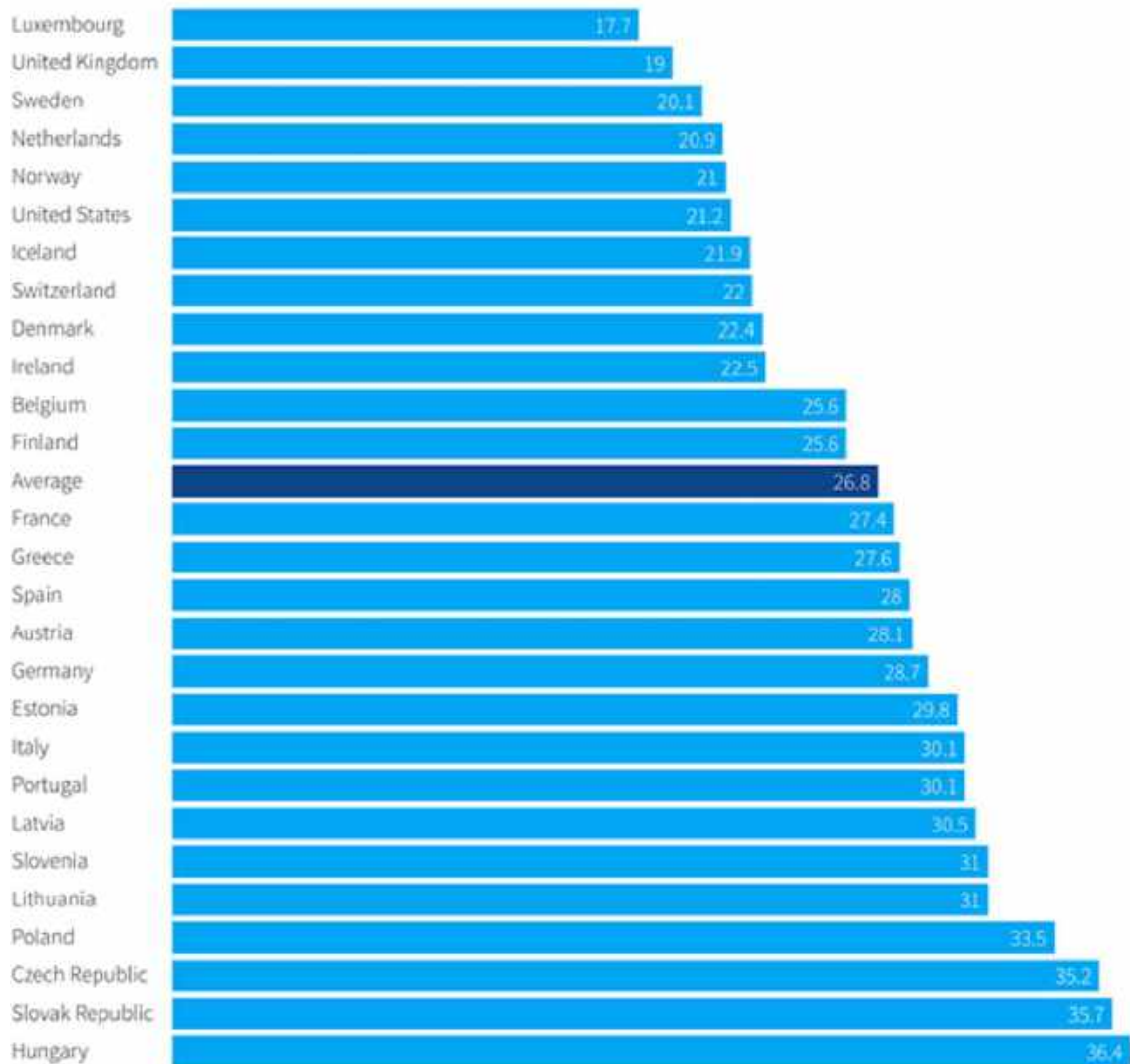
The Organisation for Economic Co-operation and Development (OECD) is a 38-member bloc, spanning mostly wealthy nations but also some emerging economies like Mexico and Estonia.

There is little evidence the emergence of AI is having a significant impact on jobs so far, but that may be because the revolution is in its early stages, the OECD said.

Jobs with the highest risk of being automated make up 27% of the labour force on average in OECD countries, with eastern European countries most exposed, the Paris-based organisation said in its 2023 Employment Outlook.

Jobs at highest risk were defined as those using more than 25 of the 100 skills and abilities that AI experts consider can be easily automated.

## Share of jobs at the highest risk of automation by country



Source: OECD Employment Outlook

Three out of five workers meanwhile fear that they could lose their job to AI over the next 10 years, the OECD found in a survey last year. The survey covered 5,300 workers in 2,000 firms spanning manufacturing and finance across seven OECD countries.

The survey was carried out before the explosive emergence of generative AI like ChatGPT.

Despite the anxiety over the advent of AI, two-thirds of workers already working with it said that automation had made their jobs less dangerous or tedious.

“How AI will ultimately impact workers in the workplace and whether the benefits will outweigh the risks, will depend on the policy actions we take,” OECD Secretary General Mathias Cormann told a news conference.

“Governments must help workers to prepare for the changes and benefit from the opportunities AI will bring about,” he continued.

Minimum wages and collective bargaining could help ease the pressure that AI could put on wages while governments and regulators need to ensure workers rights are not compromised, the OECD said.

## Artificial Intelligence

Reporting by Leigh Thomas; Editing by Emma Rumney

### Elon Musk takes aim at OpenAI with xAI launch

Elon Musk launched his long-teased artificial intelligence startup xAI on Wednesday with a team of engineers from the very U.S. technology firms he hopes to challenge in his bid to build an alternative to ChatGPT.

Musk has warned for months about AI’s potential for “civilisation destruction,” arguing that a race among companies such as Google and Microsoft to develop the technology should be halted to allow time for drafting regulation for the sector.

The reason for the launch of xAI is “to understand the true nature of the universe,” said Musk, who also co-founded OpenAI but later left the startup credited with sparking the generative AI frenzy.

Dan Hendrycks, who serves as the director of the Center for AI Safety, a nonprofit that aims to reduce the risks posed by the technology, will be an adviser to xAI.

The start up’s team includes several former engineers and scientists from Alphabet-owned (GOOGL.O) Google, Microsoft and OpenAI.

“We have worked on and led the development of some of the largest breakthroughs in the field including AlphaStar ... GPT-3.5, and GPT-4,” the startup said on its website.

The company, which is looking for experienced engineers and researchers to join its team as technical staff in the Bay Area, will hold a Twitter Spaces event on July 14.

Musk's startup will work closely with his other companies including Twitter and Tesla, according to the website.

Tesla shares showed little reaction to the news and were trading 1.5% higher, a sign that investors were not worried the startup will be a potential distraction for Musk.

The billionaire in March registered a firm named X.AI Corp, incorporated in Nevada, according to a state filing. The firm lists Musk as the sole director and Jared Birchall, the managing director of Musk's family office, as a secretary.

The Financial Times reported in April that Musk had secured thousands of high-powered GPU processors from Nvidia for the project.

**July 12 (Reuters)**



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## ELECTRONIC CIRCUITS WORLD CONVENTION NEWS

### **Call for Participation for Electronic Circuits World Convention 16 at IPC APEX EXPO 2024**

IPC invites engineers, researchers, academics, students, technical experts, and industry leaders to submit abstracts for the **Electronic Circuits World Convention 16 (ECWC16) Technical Conference hosted by IPC APEX EXPO 2024** in Anaheim, California. IPC also welcomes abstracts as proposals for professional development courses on all aspects of electronics manufacturing to be taught at IPC APEX EXPO 2024.

IPC is proud to be the host of the 16th Electronic Circuits World Convention. The **technical conference** and **professional development courses** are two exciting forums within the trade show environment where technical knowledge is shared from experts in all areas of the electronics industry including design, advanced HDI and PCB technologies, quality and reliability, materials, assembly, sustainability, and Factory of the Future. The technical conference will take place April 9-11, 2024, and professional development courses will take place April 7-8, 2024.

**Professional Development Course Abstracts Due August 28, 2023**

**Conference Paper Abstracts Due September 18, 2023**

**Conference Poster Abstracts Due January 22, 2024**



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### **NEWS FROM AUSTRIA**

#### **AT&S Publication of a resolution of the Annual General Meeting pursuant to Section 119 Para 9 Austrian Stock Exchange Act**

*Publication of a resolution of the Annual General Meeting pursuant to Section 119 Para 9 Austrian Stock Exchange Act in connection with Section 2 Para 1 Austrian Publication Regulation 2018*

The ordinary Annual General Meeting of AT & S Austria Technologie & Systemtechnik Aktiengesellschaft held on July 6, 2023 adopted the following resolution in relation to the eleventh (11) item of the agenda (Resolution regarding the authorization of the Management Board to repurchase shares in the Company in accordance with Section 65 (1) (8) Stock Corporation Act and to cancel shares and of the Supervisory Board to adopt the amendments to the Articles of Association resulting from such cancellation as well as on the revocation of the respective existing authorization granted by resolution in the General Meeting of July 8, 2021):

The authorization of the Management Board to repurchase shares in the Company in accordance with Section 65 (1) (8) Stock Corporation Act and to cancel shares and of the Supervisory Board to adopt the amendments to the Articles of Association resulting from such cancellation, granted by resolution in the 27<sup>th</sup> Ordinary General Meeting of July 8, 2021 under item 10. of the agenda was revoked and at the same time the Management Board was authorized according to Section 65 (1) (8) Stock Corporation Act to purchase, within a period of 30 months from the adoption of the resolution of the General Meeting own shares to an extent of up to 10% of the nominal capital of the Company, for a minimum consideration per share being at the utmost 30% lower than the average, unweighted stock exchange closing price over the preceding ten trading days and a maximum consideration per share at the utmost 30% higher than the average,

unweighted stock exchange closing price over the preceding ten trading days.

The authorization also extends to the repurchase of the Company's stock by subsidiaries of the Company (Section 66 Stock Corporation Act). Such repurchases may take place via the stock exchange or a public offering or by other legal means, and for any legally permissible purpose.

The Management Board was also authorized to cancel stock repurchased or already held by the Company without further resolution of the General Meeting. The Supervisory Board was authorized to adopt amendments to the Articles of Association arising from the cancellation of shares.

This authorization may be exercised in total or partially and also in several tranches.

**Printed Circuit**



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### NEWS FROM EUROPE

#### **European Chips Act ignores dependence on China for PCBs**

European support for domestic chip manufacturing ignores the fact the continent has become highly dependent on China to make its PCBs and provide electronic manufacturing services, according to the printed circuit trade body.

Europe's dependence for electronics manufacturing services may be more diverse but is even more acute, according to a report, Promoting silicon-to-systems manufacturing, prepared by the IPC. A silicon-to-systems, whole-ecosystem approach is needed to support Europe's goals of strategic autonomy and the "twin transitions" to a greener, more digital economy, the report concludes.

The European Chips Act is welcome but Europe should not focus only on semiconductors, according to the report. The report states that PCB manufacturing and assembly and electronic manufacturing services in Europe have been in steep decline for decades.

IPC, formerly the Institute of Printed Circuits, is a global trade association for the electronics manufacturing industry. IPC has 3,100 company members drawn from across all sectors of the electronics industry, including design, printed circuit board (PCB) manufacturing, electronic assembly, and advanced packaging.

Support the whole chain

IPC has produced a report that highlights the need to support the whole supply chain, which is only as strong as its weakest link. The report follows one produced 18 months ago lobbying for support for the US PCB industry (see Calls to support US PCB industry).



“The near singular focus” on the semiconductor industry “has obscured critically important segments of the electronics ecosystem,” specifically PCBs and electronic assembly (EMS), without which semiconductors cannot function, the report says.

Over the last 20 years, the European PCB sector experienced a steep decline, the report says, shrinking from approximately 20 to 30 percent of global production to just 2.3 percent in 2021. At the same time Europe has become “highly dependent on China,” the report asserts.

In 2020 Europe imported more PCBs from China than were made domestically. That year European PCB manufacturing was worth €2 billion while Europe imported €4.2 billion of PCBs, of which 65 percent – or €2.73 billion – came from China.

The reports adds that the domestic EMS sector has grown in recent years, fuelled by factory investment by large global companies and also by the growth of the downstream markets the sector serves, including automotive, industrial, aerospace, defence, and healthcare. However, the European Union imports roughly 90 percent of its required EMS products and services.

“Revitalizing and growing the PCB and EMS segments is essential to building a robust European electronics manufacturing ecosystem, which in turn is essential to ensuring supply chain resiliency, advancing the twin transitions, and promoting European innovation,” said Sanjay Huprikar, president of European operations. “It takes all elements in the supply chain – from silicon to systems – to successfully produce the electronics we all depend on in so many ways.”

The European Commission is aware of the issues IPC said. It pointed out that on June 23, the European Commission’s Directorate General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW) hosted a meeting on electronics assembly and printed circuit board manufacturing with key industry stakeholders, including companies from the renewable energy, aerospace/defence, automotive, and industrial sectors.

The dialogue was called following an IPC meeting in April that brought together leaders of government and industry to press for an EU strategy to strengthen silicon-to-systems innovation and manufacturing.

**By Peter Clarke**  
**eeNews Europe**



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### NEWS FROM GERMANY

#### **Otis Worldwide opens printed circuit board production hall in Berlin**

For more than four decades, Otis has developed expertise in the design, manufacturing and assembly of printed circuit boards (PCBs) in Germany. Otis PCBs made in Berlin are used in elevators and escalators all over the world, including for example in the legendary Burj Khalifa in Dubai and in Otis escalators on the London Underground and Elizabeth line.

Otis invested 8 million euros in this state-of-the-art production hall dedicated to advanced and complex PCB designs, as well as rapid prototyping and industrialization for series productions, such as those used in the new digitally native Gen360™ platform. With this new production hall, Otis is building on the expertise of its Berlin-based teams in the design and production of PCBs, a field of growing strategic importance for many industries.

The new production hall is part of the Otis SSI1 Electronics Berlin factory, which employs more than 180 colleagues who also manufacture drive packages and complete elevator and escalator controllers. Around 75% of the equipment manufactured in Berlin is destined for European construction projects, as well as the large and growing modernization market. The remaining 25% is exported overseas.

The team in Berlin also provides sales support in the planning and development of major projects, such as the recent modernization of 30 elevators at the Center Potsdamer Platz in Berlin.

*July 14, 2023*

*CHRISTIAN FERNSBY*

*Post Online Media*



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### NEWS FROM THE IPC

#### ***DART Mission Leader Ed Reynolds to Keynote IPC High Reliability Forum***

Ed Reynolds, space exploration sector program manager at Johns Hopkins Applied Physics Laboratory (APL), will present his keynote address, "The DART Mission: Earth Strikes Back," at IPC's High Reliability Forum on October 17 in Linthicum (Baltimore), Md.

Leading NASA's Double Asteroid Redirection Test (DART) mission, the first-ever demonstration of asteroid deflection technology, Reynolds and his team from APL, industry, academia and government, made history on September 26, 2022. DART — envisioned, built and managed by APL — changed the orbit of a celestial body for the first time in human history, successfully validating the concept of kinetic impactors as a method to protect Earth and mankind from future asteroid impacts.

During his keynote, Reynolds will discuss the overall DART mission and its development, describing the purpose of the mission and its place in the overall planetary defence strategic plan. He will also cover mission and spacecraft design and new technologies being validated, with special emphasis on the factors affecting reliability, design and implementation decisions that were made during the spacecraft's development and flight.

Reynolds' experience with asteroid missions runs deep. He was a systems engineer during the concept stages for NASA's Near Earth Asteroid Rendezvous (NEAR), the first mission to orbit and land on an asteroid. Reynolds began his APL career in 1985 as a space integration and test engineer working on missions such as the Polar BEAR spacecraft, the Special Purpose Inexpensive Satellite altimeter (SALT) program's Miniature Radar Altimeter Payload, the Nuclear Electric Propulsion Space Test Program (NEPSTP) spacecraft and the Active Geophysical Rocket Experiment (AGRE).

Reynolds has a master's degree in project management from the George Washington University and a bachelor's degree in electrical engineering from Virginia Tech.

For more information on IPC High Reliability Forum including agenda, speaker profiles, exhibition and sponsorship information, or to register for event, visit [www.ipc.org/event/high-reliability-forum](http://www.ipc.org/event/high-reliability-forum).

## ECHA PROPOSALS

On May 9, 2023 IPC released an urgent [“Call to Action”](#) to prompt electronics and chemical manufacturers to provide data and information on the industry's uses of perfluoroalkyl and polyfluoroalkyl substances (PFAS). This “Call to Action” was prompted by a universal ban being proposed by the European Chemicals Agency (ECHA), effectively ceasing all manufacturing and use of thousands of PFAS in the EU by 2026. ECHA is requesting technical and detailed data during a stakeholder consultation (ending September 2023) to consider whether uses of PFAS within industry sectors qualify for exemptions from the forthcoming ban.

Following the “Call to Action,” IPC received responses from the electronics industry highlighting some of the barriers and difficulties associated with identifying PFAS uses because of the number of chemicals being considered for the ban and the multi-functional uses of PFAS. IPC created a [questionnaire for the industry](#) to use to provide information to IPC's advocacy team in compiling responses to the stakeholder consultation. While we understand that respondents may not have all the information requested in the questionnaire, we ask that you consider answering to the best of your knowledge. IPC will compile information received to showcase a comprehensive view of uses. Please respond to questionnaire by Friday, August 4.

In addition to the questionnaire, IPC offers the following resources to help to identify information needed to effectively advocate for the electronics industry.

[OECD Global Database on Per and Poly Fluorinated Chemicals](#): The OECD developed a new list PFAS based on a [comprehensive analysis](#) of information available in the public domain. In total, 4730 PFAS-related CAS numbers have been identified and categorized in this study, including several new groups of PFAS that fulfil the common definition of PFAS (i.e. they contain at least one perfluoroalkyl moiety) but have not yet been

commonly regarded as PFAS. This list is an update from a list published by the OECD in 2007. ECHA plans to ban PFAS chemistries listed on the OECD list.

[PFAS in Electronics Datasheet](#): IPC in conjunction with a number of associations across North America and Europe have developed a datasheet that outlines possible PFAS uses in electronics. This datasheet is sourced from publicly available information and is not industry-backed, or fact checked. However, this datasheet can be a useful resource to begin considering if and how PFAS are used in components, products, and manufacturing processes.

[Presentation on Potential PFAS Uses in Electronics](#): This presentation provides an overview on where PFAS may potentially exist in electronics – specifically printed circuit boards, wires and cables, and semiconductors. This presentation was presented at a Chemical Watch conference December 2022 to prepare industry for the upcoming REACH Restriction.

[Trade Names Document](#): The trade names document provides examples of types of PFAS, the chemistry makeup of commonly used PFAS, and the trade names of commonly used PFAS. This document should help recognize some chemistries or products that may be used in your products or supply chain as containing PFAS.

We hope these resources and questionnaire will support your search for PFAS in products and processes. If you have any questions, please contact Suhani Chitalia, IPC's environmental regulatory affairs manager, at [SuhaniChitalia@ipc.org](mailto:SuhaniChitalia@ipc.org).

## NEWS FROM THE TPCA

### **Taiwan FPCB makers expect revenue growth from new US client smartphones in 2H23**

Taiwan-based flexible PCB (FPCB) makers Zhen Ding Tech and Flexium Interconnect are optimistic about their operation in the second half with the US-based handset brand's new smartphones in the third quarter.

Zhen Ding announced consolidated revenues of NT\$8.13 billion (US\$256.88 million) for June, down 1.74% on month and 35.7% on year, with the amount for the second quarter reaching NT\$23.54 billion, down 25.39% sequentially and 31.84% on year, and that for the first half at NT\$55.08 billion, down 19.53% on year.

Zhen Ding pointed out that the on-month revenue decline in June was due mainly to the shrinking orders from its US-based client as it is ready to release its new-generation models in the near future. However, its

revenues from PCs, IC substrates, automotive radars, base stations and servers all enjoyed a double-digit increase from a month ago.

Zhen Ding expects its clients to begin preparing component inventory for their new products, which should benefit Zhen Ding's operation in the second half with a mild recovery.

Flexium reported consolidated revenues of NT\$2.43 billion for June, down 19.78% on month and 14.52% on year, with the amount for the second quarter reaching NT\$8.12 billion, up 3.41% sequentially and 11.11% on year, and that for the first half at NT\$16.22 billion, down 3.48% on year.

Flexium's shrinking revenues were also affected by the weak shipments of its US-based handset brand client due to the slow season, the company noted.

Sources from market observers pointed out that Flexium's weak June revenues were partly because of the decelerated shipment momentum of 15.3-inch MacBook Air FPCBs, which had strong shipments in May but did not extend to June.

Since the US-based handset brand's new smartphones for 2023 are adding a new piece of FPCB for high-frequency transmission compared to models released in 2022, the sources expect the new board should contribute significantly to Flexium's operation.

Flexium has also been pushing the R&D of the liquid crystal polymer (LCP) technology and will continue to develop high-rise LCP substrates for high-frequency transmission applications.





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## International Diary

### 2023

#### **EIPC @ FED Conference**

Augsburg, Germany  
20 & 21 September

#### **22<sup>nd</sup> EIPC Technical Snapshot Webinar**

Registrations via [www.eipc.org](http://www.eipc.org)  
October

#### **EIPC @ Productronica 2023**

Stand B3-529  
14-17 November  
München, Germany

#### **23<sup>rd</sup> EIPC Technical Snapshot Webinar**

Registrations via [www.eipc.org](http://www.eipc.org)  
December