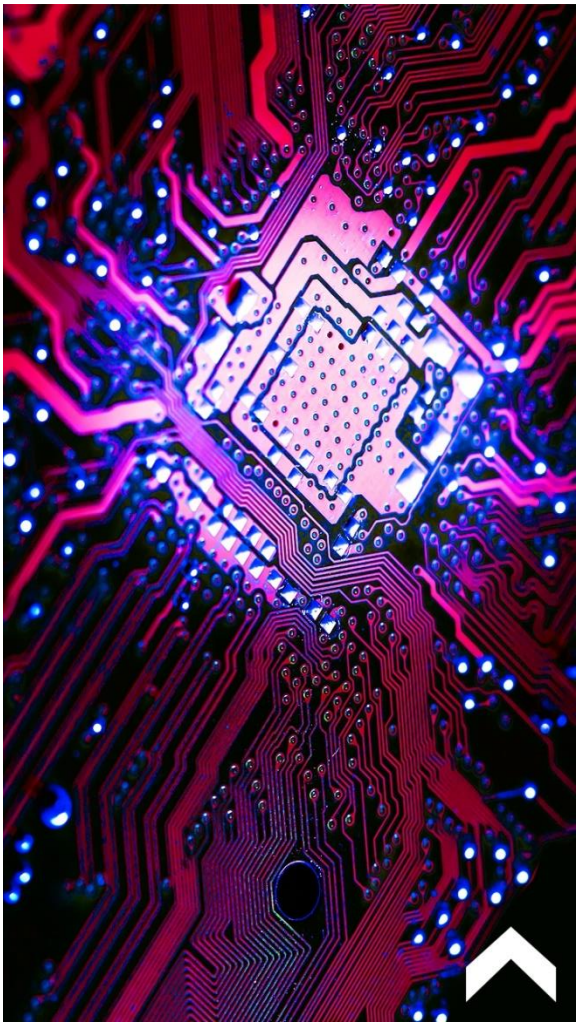
The Zenith

January 01, 2018

Volume 1, Issue 1



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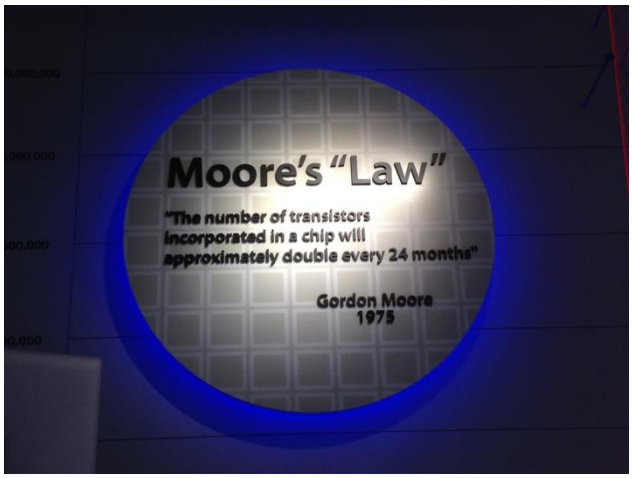
Walmart News

The fear of robots taking jobs from people is nothing new, but now and then it rears its head anew. This past month, Walmart announced plans to begin using robots that roll through the aisles to perform tasks like scanning the shelves for items that are out of stock or mislabeled.

Walmart has assured worried employees that the robots won't be replacing humans – they claim they're just to make human jobs more efficient. But if there's less to do, it just makes sense that fewer people will be needed. This is only one small move in the direction of human work being handed over to robots, but it is a move in that direction nonetheless.

Source: www.hostgator.com



Moore's Law Still Refuses to Call it Quits

The end of CMOS scaling has been expected for quite some time, but the engine that is Moore's Law refuses to call it quits. There's an obvious reason for scaling to stop: the Laws of Physics – a brick wall of substantial construction. Yet the industry continues to push towards it, even though the rate of progress has slowed somewhat.

TSMC gave some insight into the future during its latest investor meeting. Co CEO Mark Liu said that now its 7nm process technology was ready for production, most of the team that developed the process were now working on 3nm technology. "We also have a big pathfinding team," he added, "developing technology to see if we can go beyond that."

Source: Graham Pitcher Newelectronics.uk

Enabling Robust Data Communications within a High Voltage BMS

The primary purpose of the battery management system (BMS) is achieving reliability, performance and longevity of battery packs. As part of this, the battery management electronics measures each cell voltage and transmits this information to a central processor. For high voltage battery strings – such as is typical for automotive drivetrains –a modular distributed pack is an attractive choice. Battery modules can serve as the basic building block for multiple pack designs. Modules also allow for optimal weight distribution and maximum use of available space. The biggest challenge is the datalink required to operate the pack as a single unit.

An electrically noisy environment, such as within automobiles, is a big challenge for data communication links. Although a CANbus link, combined with isolation, can provide sufficient noise-rejection, it is a complex, costly solution. For this reason, Linear Technology developed isoSPI, a two-wire adaptation of the standard Serial Peripheral Interface (SPI).

Robotics and AI...

"...could help to boost productivity down on the farm when EU subsidies end"

The continuing Brexit negotiations have yet to bring certainty to any industries. While New Electronics has already highlighted the concerns of the scientific research community, another group is waiting anxiously for progress.

That group is the UK's farmers. Currently, the UK's agriculture sector receives some £3billion a year in EU subsidies. That money will stop when the UK leaves the EU. While the Government has said it will match that funding, it will only do so until 2022. What happens after that is open to conjecture, but the suggestion is that just as industry has been urged to boost its productivity, so too should farmers.

There's little chance that farmers will be left to their own devices, though. The sector contributes more than £14billion a year to the UK's economy and supports some 500,000 jobs, so the political consequences would be fairly unpleasant.

Is it more than a coincidence that at the recent National Farmers Union conference, industry secretary Greg Clark announced a £90million investment in robotics, AI and earth observation technologies.

Clark said the £90m funding will make the Government's Transforming Food Production Challenge a reality and enable the creation of 'Translation Hubs', helping to apply the latest research to farming practice.

Is it also a coincidence that the announcement should fall back on robotics and AI – currently the two 'go to' phrases for politicians who want to look on the ball?

The potential for both technologies is huge, but each carries with it a significant downside. In the case of robotics, the downside is the perception that the technology is taking people's jobs away from them. The downside of AI is that it might actually be too clever for its – and our – good.

Robotics will have a place in the industry of tomorrow – whatever the sector – but it won't be to the exclusion of humans. While some captains of industry will see the opportunity to replace workers with automation, others see collaborative robots – or cobots – as having the potential to augment our abilities.

Source: Graham Pitcher
Newelectronics.uk

Expert Lecture/Seminars/Courses/Industrial Visits Organized

- Expert talk on "Soft skills and communication basics" was conducted by Dr. Medha Saykhedkar on 27th December 2017.
- A presentation on "Improving Employability of Our Students in association with Siemens, Nashik was conducted by Mr. Sachin Bhanushali and Mr. Madhukar Dubey on 18th December 2017.
- Industrial visit to Balaji powertronics (MICROTEK) at Parwanoo, Himachal Pradesh was organized for TE & BE students on 18th December 2017.
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Papers in National/International in Journals/Conference

Prof. Dr. Manisha P. Satone presented paper on "KKWETC" Indian Face Database in International Journal of Engineering Trends and Technology (IJETT) – Volume 54 on 1st December 2017.

Abstract:

To test face recognition algorithm developed by researchers, it is needed to have proper database. This paper describes an Indian face database 'KKWETC' of visual and thermal static images of human faces. Images were taken in uncontrolled indoor environment. Database contains 816 static visible images of 68 subjects and 150 thermal images of 50 subjects. A baseline Principal Component Analysis (PCA) face recognition algorithm was tested on both databases. Researchers can use these databases to test algorithm and compare results. Database is available to research community through the procedure described at http://engg.kkwagh.edu.in/media/post_image/database_info_website.pdf.

Keywords: *Face recognition, database, thermal images.*

Published By

Department of E&TC

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