The Zenith

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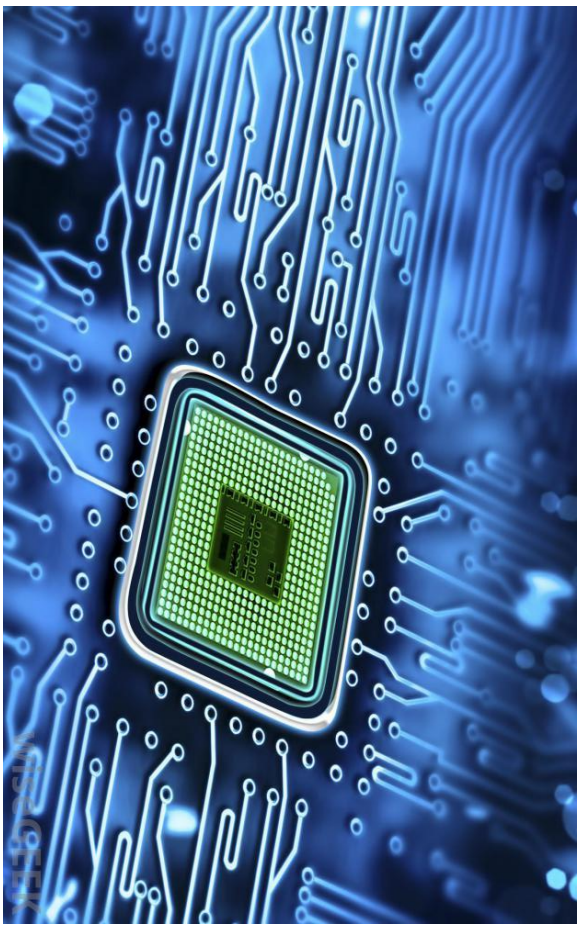

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Prediction for the design industry in 2018

1. Smart Metering: An adjustment to the Smart meter roll-out. It is looking unlikely that the SMETS2 rollout, which is the installation of smart meters that can be switched between utility providers, will be met as planned by 2020 – there has simply been too little done so far and there is a groundswell of opposition. Something has to give.

2. Smart Home Systems: IoT will become even more inclusive, with new and existing products integrating into smart home systems such as Google Home, Amazon Alexa and Apple Homekit. As well as exposing APIs to give other developers the ability to use more open technologies, for example Samsung Smart things, IFTTT and Deutsche Telekom's QIVICON. Instead of having a myriad of standalone IoT home devices – each with their own proprietary communications protocol – we anticipate the growth of a more cohesive, standardized approach in this space using the above technologies.

3. Bluetooth: Bluetooth 5 and Bluetooth Mesh are separate technologies but both have been recently approved by the Bluetooth SIG. Expect to see a rapid increase in the number of Bluetooth 5 devices over the next year. Advantages are meshing ability, increased data rate or range and an increase in advertising capacity. The addition of meshing in particular is interesting in relation to the impact this could have on Thread and ZigBee. For end users, this should remove one of the bigger flaws in Bluetooth; its limited range.

4. Constricted Component Supply: Problems with manufacturing of electronics due to constricted component supply. Standard lead times have gone out as lots of parts are on allocation (with buyers allocated limited quantity from suppliers) due to continuing growth in markets, including mobile and automotive, pushing up component demand. Semiconductor mergers and acquisitions have also had an impact on availability, and memory prices have rocketed. This will cause problems for everyone but the tier one companies, who are limiting their exposure to supply issues by swallowing the stock.

5. Automotive Communication: Standards will develop for self-driving vehicles to adapt driving styles and routes based on shared information. Together with this, we expect growth in the automotive semiconductor sector - occupied by giants including NXP Semiconductor, Renesas Electronics and Osram - as the insatiable demand for infotainment from drivers shows little sign of abating.

Author
Dunstan Power

Another achievement for EUV

I asked in January, with a degree of uncertainty, whether EUV lithography had finally come of age. I based the question on a number of developments that, together, pointed to EUV making it into mainstream semiconductor production in the next year or so.

Now, another affirmation of EUV's worth has come from a joint announcement by Samsung Electronics and Qualcomm that the latter's Snapdragon 5G chipsets will be made on Samsung's 7nm LPP process, of which EUV plays a part. According to the foundry, it has run more than 200,000 test wafers using EUV, with yields of 256Mbit memories – the test chips – reaching 80%.

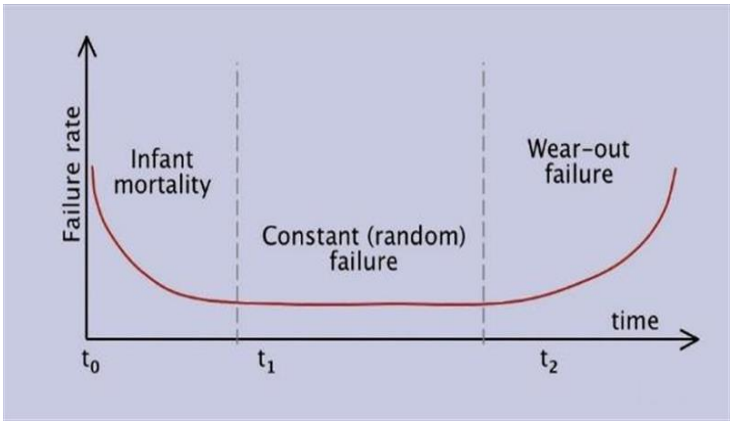
7LPP – apparently the first process at Samsung to use EUV – could enter production later this year, but how much of the lithography process relies upon EUV remains to be seen. Samsung claims 7LPP has fewer process steps than are used in its 10nm FinFET process, which suggests EUV is making a contribution.

Source: Graham Pitcher

Newelectronics.uk

How to Improve Power MTBF & Reliability

Power supply reliability is important - no one wants their production line, measurement instrument, communications system or electronic product to stop working prematurely due to a failure. How is reliability defined, what methods can designers use to improve reliability and how do you ensure that a selected product will meet expectations?



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Expert Lecture/Seminars/Courses/Industrial Visits Organized

- A Seminar on "Avionics Navigation" was conducted by Mr. K. Shankar Narayan, HAL on 2nd February 2018.
- Workshop on "Web designing and mobile app development " was conducted by Mr. Ajay Avadh, Senior software developer, Snapwork Technologies on17th & 18th February 2018.
- A Seminar on "Applications of control systems in Indian Railways" was conducted by Mr. V. N. Bodade on 17th February 2018.
- A Seminar on "Group Discussion" was conducted by Dr. Shalmali Gadge, MBA dept., KKWIEER on 20th February 2018.
- Industrial visit to Caprihans India Limited, Satpur, Nashik was organized for TE students on 22nd February 2018.
- Industrial visit to ISRO at Banglore, Karnataka was organized for SE students on 23rd February 2018.

Campus Placement

Sr. No.	Name of the Company	No. of students Placed
1.	TCS	5
2.	Qspider	6

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