

### Wednesday 6 September

12.00 pm	<p><b>What you should know about Coax Cable</b> Presenter: Stefan Burger, Delta Gamma Issues that will be discussed are: impedance, ohmic and dielectric loss, influence of metallisation, surface roughness, main dielectric material, phase stability via temperature and bending, kink protection, connectors, the influence of humidity, and irradiation effects.</p>
1.00 pm	<p><b>The Product Development Process and How PCB Design Fits In</b> Presenter: Ray Keefe, Successful Endeavours Ray will discuss the trade offs between product features, what you do in hardware and in software and how to select the technology you want to put on the PCB based on the combination of Contract Electronics Manufacturing (CEM) or in-house capability, component lead time, test requirements and product cost.</p>
2.00 pm	<p><b>Internet of Things</b> Presenter: Simon Blyth, LX Group The Internet of Things (IoT) is the network of the physical devices, vehicles, buildings and other items – embedded with electronics, software, sensors, actuators, and network connectivity that enable these objects to collect and exchange data. Each thing is uniquely identifiable through its embedded computing system but is able to interoperate within the existing Internet Infrastructure. Estimates are that the IoT will consist of almost 50 billion objects by 2020.</p>
3.00 pm	<p><b>The Fusion Guitar Project</b> Presenter: Sergei Plishka, Outerspace Design &amp; Matthew Adams, Tekt How we developed the world's smartest electric guitar with built in amp, battery speakers and iPhone integration, letting you play anywhere and unleashing a world of creativity and effects using amazing apps. We will discuss the electronics involved including the approach, MFi, Cypress, testing and troubleshooting.</p>
4.15 pm	<p><b>Low Pressure Moulding – Electronics Encapsulation</b> Presenter: Karl Baxter, Tarapath An introduction to low pressure moulding will be given – What is It? A comparison will be discussed between LPM and other methods of protecting electronics. Case studies will be presented and the materials used in the process will be discussed.</p>
5.00 pm	<p><b>Developing and ESD Plan and Audit Program</b> Presenter: Ken Galvin, SMCBA Master IPC Trainer Companies appear to be far too complacent when it comes to recognising the danger of ESD and EOS to sensitive components. Ken will discuss the importance of developing and implementing an ESD plan and ESD auditing. He will look at the key elements that should be addressed in an effective ESD plan, implementation of the plan, the maintenance of it and the audit of it. The costs of ESD can be significant especially when expensive components are involved or the product fails in the field.</p>

10.30 am

## **Developing an ESD Plan and Audit Program**

Presenter: Ken Galvin, SMCBA Master IPC Trainer

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11.15 am

## **Total Product Cost of Ownership and the Role of PCB Manufacture in Contributing to the Cost**

Presenter: Ray Keefe, Successful Endeavours

The total cost of ownership of a product is a concept that looks at all the investment required to bring a product to market and manage it throughout its life cycle. It isn't just a case of minimising R&D spend or getting the Bill of Materials to a minimum. What will be presented is a model looking at the five major costs areas involved in the development of a product throughout its life cycle and how taking all five into account can enable you to get the best return on the important investment made in bringing new products to market.

12.00 pm

## **The Do's and Don'ts of Choosing an Enclosure – or how not to put the cart before the horse!**

Presenter: Pat Cookson, Hammond Manufacturing

How to decide on the ideal enclosure: the materials, custom vs standard, modifications, longevity, costs and IP ratings will all be discussed.

12.45 pm

## **IoT (Internet of Things) and Product Development**

Presenter: Mark Steiner, HETECH

What is IOT and how does it apply to electronics design and manufacturing. Trends and the technologies available. What about the end-consumer? Future trends.

1.45 pm

## **The Challenges of LED Encapsulation**

Presenter: Alistair Little, HK Wentworth

With the increasing adoption and use of LED's in various lighting applications worldwide, the LED is being exposed to a wide range of different environments for increasingly longer periods of time. In order to provide the desired levels of performance in many cases the LED must have some form of protection. The presentation will show that encapsulating the LED can not only provide the desired protection, but also potentially improve its performance. Among the various factors discussed will be the design of the unit, the choice of resin and the methods of applying the resin, with examples from Electrolube's files and projects.

2.45 pm

## **IPC STANDARDS AND TRAINING - Amendments and New Programs**

Presenter: Ken Galvin, SMCBA Master IPC Trainer

Ken will discuss the most significant amendments to the most commonly used IPC standards. How to select the right IPC training program to suit your needs and your contractual obligations and discuss the new training programs to be released shortly.