Guest Editors' Introduction

How to Make Innovation in Consumer Electronics

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Revolutionary innovations (also called discontinuous innovations), which are often disruptive and new is synonymous with risk-taking and organizations that create revolutionary products or technologies take on the greatest risk because they create new markets. The old common sense leads the continuous advancement of performance. However, after innovation, new common sense leads the discontinuous extraordinary fast advancement of performance.

Innovation is often discontinuous and disruptive, taking the greatest risk and creating new markets and new common sense. We cannot expect revolutionary innovation so that it is very difficult to start researching such kinds of disruptive technologies. But the KPS for generating innovation is inventing the fusion or combination of novel hardware and software in different technical fields. They are exactly in our consumer electronics fields so that we can generate innovative technologies as a center of innovation, collaborating with each other.

With the above thoughts, we invited perspective authors to contribute to the current Special Section that presents how to make innovation in consumer electronics and consumer technology.

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We briefly present the accepted papers in the following paragraphs.

The article titled "Birth of the innovative overdrive technology for liquid crystal: Paving the way for practical use of LCD" presents how to invent the overdrive method that emphasizes the voltage applied to the liquid crystal for only a certain period according to change in picture brightness for high-speed response LCD TVs based on their proposed LCD motion blur model and it has been widely used as the defacto standard technology for LCDs.

The article titled "Augmenting Cybersecurity in Autonomous Vehicles: Innovative Recommendations for Aspiring Entrepreneurs" presents innovative recommendations and guidelines based on the cybersecurity principles of confidentiality, integrity, and availability, outlining the concerns that an aspiring entrepreneur should be aware of before entering into the autonomous vehicle industry.

The article titled "Innovation, Standardization, and Business Success in Media Signal Processing" presents innovation, standardization, and business success in the field of media signal processing. A good solution to solve the problem with the customer is first explored as the key to invention. Innovation is developed from the invention with insight to the true and promising customer needs.

Relations between innovation and standardization, innovation and market development, as well as innovation and business success, are discussed with examples.

The article titled "How was the world's first single-tube color video camera for home use born?" introduces the world's first home use color video camera IK12 released in 1974. It was so small and light weight that even women can use it and it opened up a new market for home video cameras. How the groundbreaking single tube color video camera for home was born are discussed from a technical point of view.

The guest editors sincerely believe that this Special Section will not only be a good reading for consumer technology researchers around the globe but also provide some hints to engineers, researchers, industrial experts, and other stakeholders to make innovations in the field of consumer electronics. The guest editors would like to thank all the authors for their excellent contributions and the reviewers for their help in reviewing the manuscripts.

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