



Three Landmark IoT Developments and Evercell™

Timing Is Everything

The Face® Companies' Evercell™ technology will be coming to market just at the moment when it can support the energy needs of a growing population of Internet of Things (IoT) devices that will soon number in the hundreds of billions.

Face® now has a greatly enhanced opportunity to power those devices because of three extraordinarily important technological developments: the 5G mobile network, the Narrowband IoT (NB-IoT), and a breakthrough in the Bluetooth Low-Energy platform that more than doubles its efficiency.

Deployment of these game-changing technologies is already under way, thanks to an investment of hundreds of billions of dollars by some of the world's biggest tech companies – an investment that is dramatically expanding our market opportunities.

5G Makes Room for the IoT Population Explosion

The next generation of mobile networks – 5G – started to roll out in the last few months and is expected to gain a global foothold by 2020 – just when the Evercell™ technology makes its commercial debut.

5G is the telecommunications industry's answer to a difficult question: How is the Internet of Things going to accommodate the massive amounts of data being added to the system by those hundreds of billions of additional wireless devices?

TechRadar reported recently that 5G will provide "the infrastructure needed to carry huge amounts of data, allowing for a smarter and more connected world."



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CNNMoney produced this video describing the impact of the \$300 billion investment in 5G.

[CNNMoney Video: Here's Why 5G Is the Future](#)

Narrowband IoT Takes Evercell™ to a Whole New Level

Narrowband IoT (NB-IoT) is also rolling out at exactly the right time to support the Face® business plan. It's a new network designed to make it easier for wireless products like ours to plug into the new 5G network. [Teaming NB-IoT with 5G](#) creates the extra system capacity needed by the industry – and specifically by the wireless products we are targeting for Evercell™.

Because of NB-IoT – entirely paid for by the telecom industry – transmissions from Face®'s Evercell™ products, which now are limited to Bluetooth Low-Energy's range of 60 to 75 feet, will be able to travel more than six miles! Our products will be able to connect directly to the same network used by cell phones. And Evercell™ wireless products will still be inexpensive and their cost/performance will be better than ever.

Bluetooth Low-Energy – Suddenly More than Twice as Efficient

Even with 5G and NB-IoT, Bluetooth Low-Energy (BLE) is still very much in the IoT game for short range applications, such as in smart homes as well as medical, commercial, industrial and transportation environments. And like 5G and NB-IoT, a greatly improved Bluetooth technology should be in place when Evercell™ powered wireless devices come to the market in late 2019 or 2020.

[Leading researchers in Japan recently announced a breakthrough](#) that will slash the power consumption of a BLE transceiver by more than half, which they say will lead to an IoT population not in the hundreds of billions but in the trillions of devices.



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Evercell™ and the Evolving IoT

The rapid evolution of the global technology infrastructure we are witnessing is a major topic of discussion in our ongoing talks with potential licensees.

Everyone recognizes that batteries are not an acceptable solution. That's not only because of the cost and inconvenience – and sometimes the impossibility – of changing those batteries. It's more fundamental than that. All of our potential licensees recognize that throwing away millions of tons of worn out, toxic batteries is just not acceptable in the era of sustainability. And this is especially true when an Earth-friendly alternative like Evercell™ is available.

We've been given the opportunity to design Evercell™ products to take advantage of the huge new opportunities that will exist as a result of the technology realities of 2020 and beyond, and thanks to fortuitous timing, we did not come to market too soon, with a generation of products that would have quickly become obsolete.

We find ourselves instead in exactly the right technological place at exactly the right time.