

# The Applications of Regenerative Engineering™ Achieving Server-Grade Performance on Edge Devices



## 1. What is Regenerative Engineering™?

Regenerative Engineering is a technical breakthrough in network infrastructure - the first resilient and self-optimizing IoT software designed specifically for edge computing.

The technology relies on innovations in algorithmic filtering and ML response optimization to unlock 200W server-grade performance on 40W or less devices, enabling full visibility over edge ecosystems during crises and data surges.

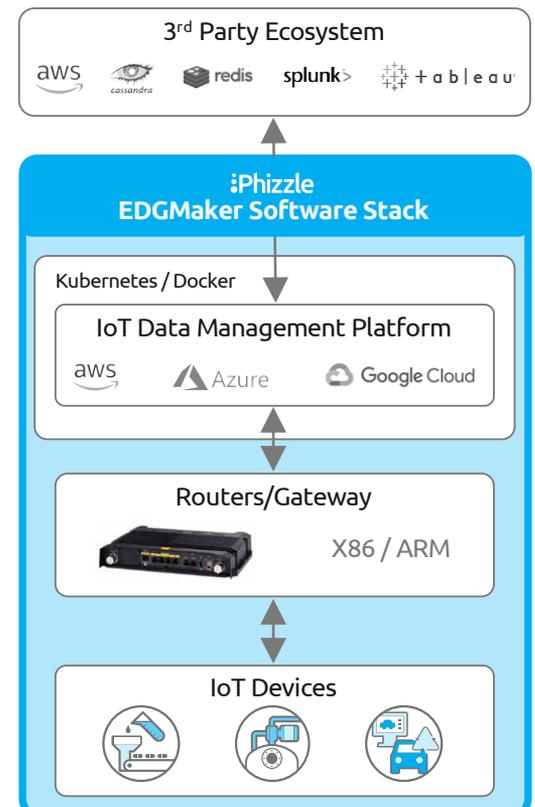
## 2. Why is Regenerative Engineering necessary for the edge environment?

Two fundamental technical challenges exist on the edge, the first being that edge devices typically operate off 40 watts of power or less. Engineers define server-grade performance as requiring roughly 200 watts of power. These low-powered devices slow computation speeds and system response times across entire networks, resulting in the inability to rely on these devices that constrains the edge market edge market.

Compounding this problem is the fact that data surges on the edge are extremely common—and when they occur, engineers are stuck trying to fight a fire with low-powered tools. A traffic collision in a major city or a manufacturing meltdown can cause data spikes in the thousands of percents, rapidly overloading IoT networks and delaying response times. *Reacting to these surges and mission-critical environments in near-real time requires server-grade performance across an entire network of IoT devices.*

Phizzle EDGMaker Software Stack

### STACK COMPONENTS



### 3. Is this a new concept or unique to the technology market?

This is absolutely a new concept to the tech market and edge computing. The underlying philosophy of Regenerative Engineering derives from several long-established concepts in the biology and medical fields. Regenerative medicines and ecosystems provide the larger body the ability to self-monitor and regulate, streamlining the diagnosis of problems and the efficient transmission of proper treatment. A well designed network ecosystem mimics these traits and does so by providing clear, actionable data to decision-makers about their edge environment - even in crisis and across millions of low-powered devices.

### 4. How expensive is it to fix the hardware problem for IoT companies?

Annually, companies spend about \$18 operating hardware for every \$1 they spend purchasing it. These operating expenses waste valuable engineering time and constitute one of the simplest ways for companies to 'fix' their hardware problem—employ intelligent edge software to automate what once was manual work for their teams.

### 5. Are other companies tackling the hardware problem through software?

Simply put, no. Most engineers recognize that advancements in chip hardware and lithography have really stalled in the 2010s, leaving a performance gap in the market for software developers to step in. If companies want better network performance, they can't continually look to hardware engineers for results. Phizzle's belief is that software engineering will be critical to ensuring that the edge market makes good on its potential.

### 6. Does Phizzle own the technology patents?

Yes, Phizzle owns the patents to several of these proprietary technologies including:

- A. System and Method for Distributed Work Processing Across a Network Where Each Machine is Operative as an Application Server and a Database Server - Granted Patent No. 10,057,323
- B. Broadcast Quality Graphics Creation and Layout - Granted Patent No. 9,620,167

In addition, Phizzle also has pending patents on select features of the EDG Maker Decision Engine Solution.

### 7. What will be the ultimate impact of Regenerative Engineering on the edge market?

By solving these fundamental problems of power and data complexity on the edge, businesses are finally able to rely on IoT devices to operate in mission-critical environments. There are technologies in certain industries— for example, VMWare in cloud computing, or Google in search optimization - that truly unlock a market for a variety of partners. Regenerative Engineering is the key to making a tough edge ecosystem viable across the entire IoT industry, enabling the technologies of the future to operate with server-grade performance in the most difficult computational environments. Ultimately, this innovation will be a key driver for the future of edge computing and the creation of a robust partner ecosystem.

## Regenerative Engineering™

**Encyclopedia Definition:** the development of processes and infrastructure optimized for edge computation; resilient and self-sustaining networks designed to absorb data surges and react in near real-time across low-power devices

Phizzle is the first IoT software company to break through the performance requirements of edge device computation, enabling enterprise customers to automate and rely on IoT devices in mission-critical environments. The core innovation in the company's enterprise-class software stack is Regenerative Engineering™, which solves the power and data complexity challenges typical of edge computing in an entirely new way. Phizzle's EDG Maker solution is used by many industry-leading customers in manufacturing, pharmaceutical, transportation, oil and gas, and smart cities initiatives around the world. The company's go-to-market partners include Cisco. Founded in 2005 and headquartered in San Francisco, Phizzle has a history of creating innovative products from consumer data to machine data.

