CIOReview

The Navigator for Enterprise Solutions

50 Most Promising Internet of Things Companies-2014

With the increasing number of inter-connected and internet connected devices, the networking space today is going far beyond the traditional human-to-machine communications. The everyday consumer objects are turning into communication end points for a well connected world—the trend fondly called as Internet of Things (IoT). Now, with the help of a multitude of internet connected sensors, a retailer knows when to replenish the stocks in their vending machines and a driver can select the shortest route for travel, based on the information about the traffic delays–No wonder, IoT is increasingly integrating into our society and supporting our daily life.

The spectrum of IoT probably spans more areas than the existing technologies of today—including multiple research areas like Body Area networks, Device-to-Device communication networks, Home Area networks, Unmanned Aerial Vehicle networks, and Satellite networks. The development of device sensors and wireless networking technologies like Wi-Fi, Bluetooth, 3G and 4G, is giving the momentum required by the IoT.

With a scenario set like this, the future of IoT might be closer than we think. Smart homes are just the beginning of this. But going forward, IoT will be a lot more than just connected refrigerators or coffee makers. Sensor technology will enable computers to observe, identify and understand the world, without the limitations of human-entered data. New technologies like artificial intelligence and machine learning will result in exciting new range of connected devices in the times to come. IoT is surely taking the world beyond standalone devices, into a new era where everything is connected.

This entire spectrum of IoT offers significant opportunities for technology providers. Integration of new technologies, marketing and sales support for small customers and ecosystem presence, are the attributes that define a successful IoT technology provider. For the semiconductor and electronics hardware vendors, it can be a high-volume, low-dollar market. To drive the revenue growth from the vast IoT ecosystem, the vendors must enhance their embedded software and middleware capabilities or partner with software component suppliers.

In this edition of CIO Review, we bring to you "50 Most Promising Internet of Things Companies 2014", featuring the best vendors and consultants providing technologies and services related to Internet of Things.

A distinguished panel comprising of CEOs, CIOs, CTOs, analysts including CIO Review editorial board has decided the top companies that are at the forefront of tackling challenges in the Internet of Things market in the US.

Company:
Niksun

Key Person:
Dr. ParagPruthi,
CEO

Website:
niksun.com

Description:
Experts in the design and deployment of IoT systems that help OEM enterprises build smart products that outperform and outlast other products.

NIKSUN: Accelerating the Industrial Revolution in the IoT Space

The volume of traffic generated through the Internet of Things (IoT) and conventional Internet nodes vary greatly. The traditional Internet causes significant deviation in traffic, and makes average behavior less frequent. In the IoT world, the amount of network traffic generated is much lesser. However, correlating and assessing this traffic for security violations requires high-speed methods at aggregation points, and becomes quite challenging as the number of devices increases. This requirement is the key area of work for NIKSUN, a cyber security and network performance company, based in Princeton, NJ. NIKSUN, responsible for making the unknown known, provides a highly accessible array of real-time cyber security and performance management solutions.

Today, NIKSUN remains the exclusive monitoring solution with the ability to simultaneously detect, assess, correlate and store network traffic.

In the words of Dr. Parag Pruthi, NIKSUN Founder, Chairman and CEO: "Many public companies are unable to cater to the requirement of a research-based innovative approach, as they have short-term goals, and depend on acquisitions for research.

Dr. Parag Pruthi,
Founder, Chairman & CEO

We differentiate ourselves by a future-oriented approach, which helps in introducing revolutionary technologies every five to six years."

NIKSUN's research and development (R&D) retains its talent to adhere from exploring in short bursts, and rather focuses on long-term innovations. This R&D tactic elevates the success and security of organizations that hinge on NIKSUN solutions.

Ideal Time to Be in the IoT Space

The Internet of Things requires a "sink" for the information produced by the IoT devices, such as private or public cloud infrastructure. An increase in the number of these devices would further lead to huge demands for storing and processing the data. A proper scalable hierarchical architecture is needed to grow the measurement infrastructure, which otherwise is a great challenge. Therefore, the IoT space, offers a unique set of opportunities.

Moreover, traditional industries such as manufacturing, logistics, healthcare, retail and others are experiencing revolutionary changes, regarding storing information from these IoT devices. Several upcoming industries are also looking forward to leveraging these devices through Big Data Analytics. For instance, automotive firms are developing smart cars that are able to communicate with each other and take precautionary or diversionary measures to avoid congestion and regulate traffic.

Due to opportunities for research, Dr. Pruthi became first attracted to this IoT space rooted in wireless and wireline communications and communication control systems. He learned that for this new revolution to succeed, two important aspects are to be focused upon. One aspect would be pathway measurement for unrestricted flow in communication. The other feature is security, as there is a need to ensure that the transactions are not subject to be hijacked and misused. NIKSUN continues to work on these two aspects, with an aim to establish operational efficiency in the IoT domain.

The M2M Dilemma

Dr. Pruthi has observed that amidst the ongoing advancements, the industry still lags behind with respect to machine-to-machine (M2M) communications. However, several service providers worldwide are actively trying to address the concern. In the next few years, a significant deployment of IoT and connectivity leading to huge volumes of M2M communications is expected. In addition, the need for engineering talent in this domain is high. NIKSUN is vigorously exploring the opportunities in M2M with an end goal: to make a perfect system.

"In the upcoming years, IoT verticals such as industrial automation, automotive advances, smart grid, manufacturing, distribution and logistics would be our areas of focus," says Dr. Pruthi, "These industries are employing IoT services faster than others."

NIKSUN positions itself within the IoT space to monitor and secure unique traffic from end-to-end. By encompassing the whole of traffic, NIKSUN plans to ensure that the Internet of Things revolution succeeds CR