

Patent Insights: Cisco, IBM & Microsoft FOG Networks & Internet of Things (IoT)



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FIRM DESCRIPTION

Liquidax Capital invests in & acquires superior innovations & related intellectual property assets that are poised to dramatically impact global markets over the next 25 years.

As an (AAM) Alternative Asset Management firm sponsoring & managing private equity innovation funds; our focus is on injecting the assets into portfolio companies which can immediately utilize them for market growth, competitive protection & value extraction.

Liquidax portfolio companies consist of public companies operating on global stock exchanges; and/or private companies funded by VC firms.

FUND DESCRIPTION

Liquidax Global Exchange Fund I, LP is a fund specifically developed for the purpose of investing-in and acquiring advanced (IoT) Technology, Innovation & related Intellectual Property Assets for the benefit of portfolio companies.

Portfolio companies enjoy the benefits of high-quality innovation and highly-correlated patents eliminating the needs for lengthy, high-cost R&D, risky M&A all while allowing immediate benefits & applications without the traditional costs or fees.

INNOVATION, IP ASSET & MARKET RESEARCH

In the course of its strategy; Liquidax performs research on companies, markets, innovation, patents, claims, & investments. When we find interesting IP information we like to openly share it with interested parties.

Liquidax Research & Analysis:



Alex G. Lee, Partner Ph.D, JD, CLP
Chief IP Strategist
Liquidax Capital LLC

Charleston, SC | Boston, MA | San Francisco, CA
www.liquidax.com | info@liquidax.com

LIQUIDAX
FUNDS

Liquidax™ Global Exchange Funds Private Equity – IoT Innovation & IP Asset Portfolio Injections

As highlighted by IDC, the worldwide market for the (IoT) Internet of Things markets are expected to reach \$7.1 trillion in 2020; growing from \$1.9 trillion in 2013. Defined as a network of networks of uniquely identifiable endpoints that communicate without human interaction using IP based connectivity. The Internet of Things brings meaning to the concept of ubiquitous connectivity for businesses, governments and consumers.

Patent Insights: FOG Computing (Cisco, IBM, Microsoft) Internet of Things (IoT) Applications & Networks

Fog computing or **fog networking**, also known as **fogging** is an architecture that uses one or a collaborative multitude of end-user clients or near-user edge devices to carry out a substantial amount of storage (rather than stored primarily in cloud data centers), communication (rather than routed over the Internet Backbone, and control, configuration, measurement and management (rather than controlled primarily by network gateways such as those in the LTE Core Network).

Fog computing can be perceived both in large cloud systems and big data structures, making reference to the growing difficulties in accessing information objectively. This results in a lack of quality of the obtained content. The effects of fog computing on cloud computing and big data systems may vary; yet, a common aspect that can be extracted is a limitation in accurate content distribution, an issue that has been tackled with the creation of metrics that attempt to improve accuracy. (Wikipedia)

Below are (3) recent FOG computing patent applications by Cisco, IBM and Microsoft showcasing their vision and description for FOG networks

FOG Computing Where Applications, Data & Computing Power Are Pushed to Logical Extremes

Cisco patent application **US20150261876** illustrates the network environment includes multiple fog computing devices each connected with a communication network. Fog computing pushes applications, data, and computing power (including computing services) away from centralized points in a network to logical extremes or edges of the network. Fog computing covers a wide range of technologies including wireless sensor and actuator networks, mobile data acquisition, mobile signature analysis, cooperative distributed peer-to-peer ad hoc networking and processing. Fog computing devices communicate with each other using a variety of Internet protocols. Fog computing devices each host HTML-based web browser that controls the operational features of the fog computing devices.

A Focus on Mobility at the Edge while Coping with Increased Bandwidth Congestion

IBM patent application **US20140297822** illustrates the fog computing system in the mobile networks. The system includes a number of edge devices such as smartphones, cameras, traffic lights and antenna towers controlled by base stations. The edge node provides application services to mobile device end users on the edge of a network. The system can cope with the increasing bandwidth congestion at the backhaul from the increasing use of data services. The characteristics of the mobile fog computing system are its proximity to end users, its dense geographical distribution, and its support for mobility.

Hybrid System where Applications Run on FOG Devices while Another in the Cloud

Microsoft patent **US9098344** illustrates the cloud-edge hybrid system that an application instance runs on the fog computing device and another application instance runs on the cloud-based computing resources. Cisco patent application **US20150078333** illustrates the fog computing system that can provide broadband internet access for high speed trains. Fog computing devices control the narrow beam transceivers that provide highly directional wireless links during movement of the vehicle.

IMPORTANT IP ASSET DISCLOSURE:

Liquidax is sharing this information because it is interesting to us and we wanted to share with those interested in IoT, technologies and patents. We DO NOT own any of the IP referenced in this brief. We are not suggesting any value for the IP referenced in this brief; and we are not endorsing or making any opinion to the success or failure of any IP referenced in this brief.

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