

On the Radar: Imont creates IoT without a cloud

By removing the need for the cloud, Imont transforms the smart home business model

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Summary

In brief

Imont's aim is to remove the spiralling costs of cloud services as IoT platforms scale to millions of devices. It does this by removing the reliance on the cloud for all but essential services such as AI voice interfaces. As well as significantly reducing the cost of the platform at scale, by keeping the data in the local network and by using a distributed mesh architecture, the platform also becomes more reliable, secure, and free from latency.

Ovum view

- The cloud is not always the right answer. There has been a growing belief that putting greater and greater intelligence in the cloud is the right way to go, as devices can then be simplified and therefore more cost effective. However, by doing so, cloud server costs can spiral in line with the number of IoT device connections, meaning that economies of scale become hard to achieve, which is a fundamental requirement of most IoT business cases.
- Imont is unique in turning the strategy on its head. To solve the economies of scale issue, Imont has flipped the model, moving the intelligence into the IoT devices using a distributed software architecture and only utilizing the cloud when necessary. This enables the company to cut out the majority of cloud server costs so customers can achieve the economies of scale they require.
- Costs are one thing, but quality of experience is another. To date, service providers have struggled to generate successful smart home business cases and solving the scaling issue will be a huge boost to their ambitions. However, Imont's solution promises more than just cost savings; it also offers reliability, greater functionality, and better privacy – three huge barriers to smart home adoption.

Recommendations

Why put Imont on your radar?

Imont is a small innovative startup but with a very experienced team behind it. The company's sole purpose is to create a consumer IoT platform that provides good customer experience, high customer privacy, and economies of scale that no cloud-based platform can achieve. Imont must go on the radar for any service provider with consumer IoT/smart home ambitions.

Highlights

Background

Formed in 2016, Imont is made up of the original team that first helped develop AlertMe, which was acquired in 2015 by Centrica/British Gas to power its Hive smart home platform. The one issue that concerned the team when developing AlertMe/Hive was that it would never be able to generate

economies of scale. The bigger the platform gets, the more complex the cloud element becomes, and the greater the cost of renting services from cloud service companies such as Amazon Web Services (AWS). As customer numbers scale, the cost of the cloud can turn into tens of millions of dollars per year, making any smart home business case hard to generate, especially if the end customer is paying little or nothing in terms of monthly fees. Therefore, Imont was created with the specific aim of resolving this scaling issue by developing a platform that does not need the cloud to function, thus completely transforming the consumer IoT business case.

Products and services

Imont has developed a unique IoT platform that, instead of centralizing the intelligence in the cloud, uses a decentralized software architecture that is embedded in the customer's hub or on other connected devices within the home. The software client has a small Java footprint, requiring only 12MB of flash memory, meaning it can be installed on the majority of connected devices – smaller versions (written in C) are available for micro-controllers. Once installed in the home, connected devices rapidly find each other on the network, forming a mesh VPN that provides network resilience. Devices (for example, a battery-powered passive infrared sensor – PIR) that are not capable of having the software installed can simply be controlled via another device on the same network in a master–slave-style architecture.

By not relying on the cloud, all data remains in the home network, making it more secure and less prone to network latency (which can significantly hamper the performance of some devices such as the video doorbell). In the case of video storage (such as security footage), video can be stored locally or in a third-party cloud. By encoding the video locally, however, video can be streamed over the cloud via a VPN, making the data more secure and protecting against any potential hacking. Even though the entire platform can run without the cloud, cloud support is required for certain functions, for example, if the user wishes to use an AI home assistant such as Alexa. However, the cloud server support costs for this more selective use of the cloud are modest compared to a 100% cloud platform, meaning that, as the platform scales, the AWS costs do not scale with it.

Business model and commercial strategy

Imont's business model is largely based on a single upfront cost and then a minimal (less than \$0.5) support charge per user, per year. With only a fraction of the typical third-party cloud bills to pay (which are optional based on the required functionality), economies of scale are quickly gained with costs compared to some other cloud-based platforms, coming in at around a quarter of others once scale is reached.

There are some other platforms, such as Samsung, that do offer the cloud services for free as long as the client purchases its hardware. However, Imont argues that if they are reliant on a single point of contact and that data always has to trombone via the cloud, they are not as reliable, are more susceptible to latency, and not as secure. Imont also argues that, as such systems will suffer from the scaling issue mentioned previously, then it is possible that their cloud services will not remain free forever.

Appendix

On the Radar

Ovum's On the Radar series highlights up-and-coming companies bringing potentially disruptive ideas, products, or business models to their markets. On the Radar companies bear watching for their potential impact on the market for current or future services of telcos and their suppliers.

Further reading

The Road to 2023: Smart Home, CES006-000086 (August 2019)

Driving New Revenue Out of the Connected Home, CES006-000082 (August 2019)

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We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Ovum's consulting team may be able to help you. For more information about Ovum's consulting capabilities, please contact us directly at consulting@ovum.com.

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