Pricing and Selling IoT

How is value shared across the chain?

Introduction

Last week's lunch-and-learn event in London on the topic of "Pricing and Selling IoT" was more than 200% over-subscribed, leading host Pilgrim Beart (CEO of DevicePilot) to comment "Either this is a good sign that everyone is now ready to sell their IoT solutions, or a bad sign that no-one's figured-out how to make money in IoT yet - probably a bit of both." The 30+ attendees included IoT vendors, IoT customers and IoT analysts.

Pilgrim introduced the event by describing an IoT ecosystem that's still emerging and in flux, with more than 10x variation in per-device per-month service fees, and business-models shifting from up-front product fees to ongoing service fees. He concluded by using BG Hive's recent BoilerIQ offering as an example of a classic IoT win-win application, as it provides both better customer experience and increased efficiency for the vendor. He also noted that Hive has recently transitioned to a pure service model.

Guest speakers

Three guest speakers then outlined their IoT use cases to serve as concrete examples for the following workshop sessions.

Nick Rutter, Chief Product Officer and Founder of Sprue Safety Products
- Sprue makes smoke and carbon monoxide alarms, is known by its brands including FireAngel, First Alert and AngelEye, supplies about 65-70% of UK retail alarms, and ships around 10m devices/year. Work on their FireAngel Connect internet-connected alarms commenced around 4 years ago.
- Lots of stakeholders for connected alarms, including Fire and Rescue services, carers, siblings, family friends, leasing and insurance companies.
- Have sold >300,000 alarms to multiple German housing associations - legislation requires annual testing, opportunities to automate that. Experimenting with pricing of product vs. ongoing service
- Discovered pattern that fatal fires are often preceded by near misses, giving an opportunity to predict and prevent them
- Strategy is to build a presence in the market and then monetise. Recurring revenue is an attractive model. Exploring fully leased option.

Jon Lewis, Director of Strategic Product Marketing at Telensa
- Telensa make connected street lights and have global market share of ~18%. Biggest competitor is Silver Spring. Big lighting companies like GE and Phillips actually quite small in connectivity. Connected street lighting can save ~$30/light/year.
- UK leads in connected streetlights – about 1 in 5 lights are now connected, ~50% by Telensa. Market focus now on the US, rolling out the biggest smart street lighting system in Atlanta, Georgia, ~400,000 lights.

- Radio network is ultra-narrowband. Having rolled this out for lights, can then act as a free IoT network for other Smart City applications.
- Continued use of proprietary networks is not sustainable, so trying to lead work on a common standard with ETSI alongside Fraunhofer, Sigfox and Sony.
- Two types of network for lighting: private networks like Telensa (owned by city or its contractors) and public network like Sigfox, O2, Vodafone etc. It's not just about price, it's about ownership – if there's a "not spot" in a public network, tough. Also, councils expect connectivity to work for 20+ years, which a public operator won't commit to.
- Lots of ways to add more value to lighting, e.g. dim at night, dependent on traffic flow etc.
- Telensa effectively sells a spreadsheet: "How much is going into the energy costs? How much going into maintenance?" As Lighting is the most mature Smart City application, there's experience over hundreds of installations to say e.g. "over a particular timeframe - typically about four years - you can be making your money back, and then a lot of very good savings after that".
- Big variety in end-use value, e.g. a city would only spend ~£4.50/gully/year so any savings from monitoring those much smaller than lighting. But with gullies possible to integrate traffic information with rainfall information to build up a city model and make predictions not just when gullies will need cleaning, but also e.g. "how much arsenic has come off your brake discs?". So again it's selling a spreadsheet each month: detailed net present value (you paid this much for our system, and you can see this month that you saved certain amounts of money).
- A Moscow project several years ago delivered 5,000 on-street parking sensors. Value of a Westminster parking space is ~£5,000/year, so exciting to see if one can increase occupancy by 10%? But complexities of local regulations (e.g. Blue Badge usage, 10-minute grace period). But shows the diversity of value, and as a connectivity-provider, raises the question of how Telensa could take value in a way which is related to the value of the service.
- Most of Telensa's business today is in hardware sales. ~70% of the price goes into the actual controls, <10% goes into the base stations and connectivity, and then ~5% for hosting and support.
- With a very predictable cost and savings model, >50% of contracts now go through some kind of financing with the city. The concept of an Energy Service Company (ESCO) is very prevalent in the US. They will be selling a service to the city and they'll be saying "we will be managing your lights and driving savings, and we'll take x% of the savings". Now Telensa is expanding the openness of the platform and making it more valuable as a tool in its own right.
- And Data Analytics – with 1500 customers, can see which are saving most, and which least, and share best practices.

Richard Porter, Head of Smart Home Product & Partnerships at O2
- O2 UK is owned by Telefonica and has 25m UK mobile connections, primarily to consumers. Also run nationwide free O2 Wi-Fi with 28m customers.
- And a growing business IoT connectivity, e.g. Tesla cars, and part of UK smart metering rollout
- Recently moved into two consumer-facing IoT spaces:
    - O2 Drive - car insurance for the younger generation. By sharing some data they get cheaper car insurance.
    - O2 Home - Richard's responsible for Product there.

- O2 Home wraps a set of devices into a proposition and sells them to UK consumers. Launched in pilot ~6 months ago, quietly, slowly - a big beast to crack. Launched initially in three stores, then doubled to six stores. Learning how to talk about it, and price it. A challenge for O2 is that this is the first offering which requires a visit into the home.
- Three key learnings from the six-month pilot so far:
  - ***Proposition not product.*** Addressing 'early majority' market, who really don't care what the product is underneath. So we wrap up our offering into a couple of bundles of things
    - O2 Home Comfort – thermostat, saving money on your energy. Average UK home can save around 20% of its annual energy bill with a smart thermostat very similar to the Hive offer
    - O2 Home View - that's cameras in the home and peace of mind
    - Avoid talking about the product, instead talk about people's lives and ways – and change them! Some examples of things that have worked well:
      - Send a text when door contact sensor triggers. Lovely peace of mind. In an hour I expect my phone to give me a nudge to say my son is home from school.
      - Slightly more expensive: Smart door locks. No longer worry about where your keys are, never be locked-out of the house.
      - At the more complicated end is when things start to talk together. The tado thermostat knows when you're at home, so with O2 Home you can connect that thermostat knowledge to your security system, so when you get home you don't have to turn the alarm off. Reducing little bits of friction in consumers' lives.
  - ***Price elasticity.*** Currently O2 Home is a 24-month contract, priced at around £15/month with no upfront fee - so a service model from day 1. We're putting around £300-400 worth of kit into somebody's home. We're visiting that home, there's the cost of an install, and we're just spreading the cost. Having experimented with price-elasticity, current price point is about right for the UK. Elasticity data comes not just from the kits we sell, but we where we don't sell.
  - ***Importance of real experience.*** Touching it, feeling it - come to a store and see it. What is this IoT stuff? Right through to when the installer visits the home – around a third of customers buy more devices when the installers visit and the customer can see all the kit.
- Now working on scaling. Currently sell four O2 Homes per store per week, which scaled-up across the 450 O2 stores across UK starts to become interesting business. Sure at the end of that 24 month period you can take the kit and we drop the monthly fee down, but you still have to pay a monthly fee to around £10 pounds/month if you want to stay connected.
- [After a question about long-term service pricing] Fee is reduced after initial period, but important to be clear whether it's a service fee or a hardware financing. O2 does service visits too.
- There's a long journey to go on: Assisted-living, smart insurance etc. Many of the pieces of hardware can deliver multiple benefits across e.g. security, energy, telecare.

Workshop 1

The attendees then broke into teams of six to discuss the first workshop topic, which was all around changing business models. The questions they addressed were:

- How are IoT Business Models changing?
- What are IoT Pricing structures?
- How is value shared across IoT chain?

A spokesperson from each group then talked through their findings on a "Post It Note" wall:

Workshop 2

In the second workshop, the teams discussed how – given all the flux in models and pricing currently happening in IoT – all the players in the value chain might still make progress together. In other words, how can we all get to market and make money despite the uncertainties?

Again, spokespeople brought back the findings to the Post-It Note wall: