

Small steps to big data

The Internet of Things is definitely here to stay. With the first phase of connectivity basically in place, the developer community is now seeking to add value to the IoT, creating offerings that solve problems, and that users are willing to pay for.

Evothings of Stockholm was founded with the vision to make it easy and efficient to develop mobile applications for the Industrial Internet of Things (IIoT).

Alex Jonsson is an Evothings co-founder and their CTO. He holds a PhD in Computer Science and was educated as a mechanical engineer, but his career path led him to media technology, and on to the industrial interface between the mobile phone and embedded technology.

“These are two different worlds,” he says. “Young people are comfortable with the mobile phone and how to develop for it, while the older guard traditionally work with embedded technology.” For Alex, it’s a matter of merging the two, in a way that inspires both camps.

“We want to expose the innards of embedded technology and open up for low-level, secure connectivity. For that we have to teach mobile devices new tricks.”

This means adding embedded functionality, like Bluetooth and industrial-grade protocols to make phones and tablets smarter. With this approach, major manufacturers like Ford and GM are opening up for use of mobile IIoT to create diagnostic tools and user-friendly apps, and the technology is showing up on ships as well.

Enabling the pocket computer

The connection is also making its way into the classroom. BBC and Acorn came out with a microcomputer 30 years ago, in the ‘BBC Computer Literacy Project’. The aim was to make at least one of the machines available in every school in Britain. “Now they aim to put one million single board computers in the hands of school kids across Britain,” Alex says.

The new computer is no larger than a business card, with an exposed LED array, Bluetooth, and simple push-button programming devices. Evothings created the software to connect the computer to the mobile phone, to enable students to see what is going on in the chip, and control it.

“The chips are designed to be a bit makerish and geeky, and that seems to make it even cooler,” Alex enthuses. “Kids with phones will now have sensor-prone computers in their pockets.” Many major players were involved, like Lancaster University, ARM (the former Acorn), Samsung, Microsoft – and Evothings.

Right sized

Small, but not without resources, Evothings mobilises a community of around 10,000 developers in 130 countries around the world. “Every day the community becomes more valuable,” Alex says, adding that travelling light will be an advantage for companies looking to ride the new wave of industrial apps. “The kind of accelerated development we are talking about just doesn’t happen in the big companies.”

So where is this development headed? Alex and Evothings believe that so-called hosted apps, where part of an application comes from an appstore, and part from the cloud, are the wave of the future. “I have hundreds of apps on my phone, one for each thing I want to do, but it’s starting to get a bit silly,” he admits.

Smart infrastructure, though, places apps in places, in what Google calls the ‘physical web’. The app resides in a particular space, and when the user leaves that space, the app goes away.

Above all, Alex Jonsson believes in opening up. Using open source solutions, the entire connected community can contribute to creating, fixing and improving products. “It’s not really free like a free lunch,” he maintains. “It’s more like free speech.”

According to DMI International, the average industrial app costs USD 200,000 to develop – and that’s just the average. “We have to find other methods to make apps. In order to get the data out of systems and give it value, we need more streamlined methods to put more apps in the hands of more people.”



The single board computer