



Where has the IoT been going wrong?



Alex Davies

is Principal Analyst at Rethink Technology Research, the Bristol-based thought leader in quadruple play and emerging wireless and IoT technologies (www.rethinkresearch.biz).

We have seen countless estimates of the size and growth of the Internet of Things market. All have been misleading, and now a few years removed from some of the most optimistic projections, we can see that the IoT hype-balloon has withered. **Alex Davies** of Rethink Technology Research makes the case for some fresh thinking

The wider technology industry is now, slowly, waking up to the fact that the trend pitched as the answer to so many problems is actually quite problematic – an evolutionary rather than revolutionary panacea. As such, we would propose a manifesto of sorts whose main thesis is this: “the Internet of Things” is no longer a useful term, as it is no longer properly doing its job, i.e., as a catch-all umbrella term.

The market has split into specific verticals, and as time goes on, there is less chance of a grand IoT unification. This trend is doomed to be split into islands, separate from each other – with the notion of a global hyper-connected data utopia now appearing rather quaint.

The second element of the argument is that we should begin discussing these verticals directly, because using “the Internet of Things” does not accurately discuss the industry-specific technologies and practices being used. To this end, referring to things as a “connected-X” is a better way of framing a discussion – such as ‘connected cars,’ ‘connected manufacturing lines,’ or ‘connected metering equipment.’ Those three are so different that the only real thing they have in common is an internet connection.

The third angle is that the high-level view of “the Internet of Things” is not useful from an analysis point of view, because very few people want or need such a view.

They are, instead, focused on their own specific area within the umbrella term, such that a developer of agricultural robotics has no interest in the latest advances in low-power Wi-Fi or warehouse logistics. Despite both being under the umbrella, they are entirely disparate.

And finally, somewhat related to the first point, the “Internet” in “IoT” is somewhat misleading, as all its devices are not sufficiently connected to actually refer to it as an internet. One cannot navigate to these endpoints, nor can these end-points freely connect with any other endpoint as a laptop could.

One way traffic

Many of these isolated networks are essentially one-way traffic. We may never see the IP-native IoT, which could at least somewhat facilitate

such traffic. Very few IoT devices are actually connected to the internet, directly or indirectly – they are usually hidden from view in the clouds.

The utopian view of completely shared and integrated data, akin to the World Wide Web, is very unlikely to come to fruition – instead, the IoT will exist within these islanded verticals and geographies. As such, “Internet” is the misleading element. “Web” is more accurate, as it denotes the information sharing aspect, rather than the pure networking focus of “internet,” but either way, a “Web” doesn’t look like it’s in any hurry to emerge.

Initially, this sounds quite defeatist, but that’s not necessarily the case. Data integrations are complex at the best of times, and while data marketplaces are an exciting prospect, they are not simply going to spring into existence.

Painful process

They are huge logistical headaches, and while they are potentially incredibly useful, bringing them into existence is going to be a pretty painful process – in terms of both the technology and the business case. Promising examples are Here’s Open Location Platform, and Terbine’s recent ITSA project, but even these will only connect a fraction of the total number of “IoT” devices

Instead, we should try to move immediately beyond the “IoT” umbrella, and quickly get down to brass-tacks. The term is now only useful for broadly referring to a connected object, and discussions should focus on the specific business problem or application at hand, as the idea of everything being interconnected seems decades away from achieving, at least.

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