The social web of things

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Research to be published in the *International Journal of Web-Based Communities* suggests that the familiar interfaces of online social networking sites might be adapted to allow us to interact more efficiently with our networked devices such as cars, domestic appliances and gadgets. The concept would also extend to the idea of those devices connecting with each other as necessary to improve efficiency of heating and lighting, make our home entertainment systems smarter and much more.

Are you Facebook friends with your microwave oven, is your car? Does your washing machine have a blog read by the tumble drier? Ever thought of following your lighting circuit on Twitter, would it make sense to have the electric curtain controllers do so? Well, such whimsical ideas are perhaps a little far-fetched at first glance. There are some precedents. One might follow a movie and TV streaming site on Twitter and use a connection tool to automatically control what output you record for later viewing on the TV but only if a web review site you also follow gives it a five-star review perhaps. You might even have a link between the items you flag as good or bad that then filter into Facebook updates, as many people do with the music they listen to on Spotify. The combinations seem limitless.

More mundane applications involving the lighting and heating in your home exist that allow you to have the thermostat switch on the heating before you come home either when you send it a text but also perhaps when a weather update from twitter forecasts snow. The Internet of Things is with us already as more and more domestic and other devices

are hooked up to the internet and so their sensors and readouts become accessible via a web browser or to other software and apps on your smart phone become the norm for controlling a wide range of gadgets.

The next step is the development of a "social internet of things" that allows people and their gadgets to be more coherently connected. Writing in the International Journal of Web Based Communities, computer scientists Bruno Cabral, Cibele Vasconcelos and Cássio Prazeres of the Federal University of Bahia, in Brazil, recognize that we now use online social networks as a surrogate and as a supplement to many of the activities we once were able only to do offline without digital assistance. As the internet of things evolves, there is the potential to bring together this world and to use it to enhance and make more efficient our use of refrigerators, microwave ovens, TVs, cars, cell phones and other devices to improve quality of life.

Prazeres and colleagues suggest that in some circumstances and for many applications, the people will not even be needed, our gadgets will interact through the infrastructures of social networks without our input. One would hope, of course, that automatic thermostats listening to the weather forecast on twitter and checking up on your business trip schedule would not override the logic of not turning on the air conditioning in an empty house. Online tools such as IFTTT, which stands for "IF this, THEN that", allows users to connect web applications, their smart phone, online social networks and a range of cloud services and some networked devices, such as the aforementioned lighting and heating.

The team has taken this several steps further in developing an architecture for what they refer to as a "social web of things", which provides the potential means for us to interact with our devices in a naturalistic manner, not dissimilar to our online social networking interactions with people. This anthromorphizing of connected appliances

gives us an instantly comprehensible interface, so that one might message the house thermometers to get the temperature and then tell the thermostats to switch on the heating on our command. But, the same architecture could then be extended to remove the intermediate, us, from the equation and so give us domestic bliss with minimal intervention on our part.

More information: Cabral, B., Vasconcelos, C. and Prazeres, C.V.S. (2014) 'The social web of things: enabling the interaction of people and things on social networks', *Int. J. Web-Based Communities*, Vol. 10, No. 4, pp.426–444.

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