**Traceable Society: IoT and Trust in Digital Twin**

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Abstract

In the age of IoT, our everyday experiences are to be digitally recorded and accumulated into big data. Only with a smartphone and a smartwatch, our body temperature, pulse, pace, sleep-breath, and the frequency of turnover on beds can be collected for analysis. Recent popular smart speakers also save our utterances. And the ideas of behavioral targeting and data warehouse extends coverage of these experiential datasets to more minute daily activities of opening curtains, doors, fridge, and turning various electric devices on and off. Activities on street are, of course, caught by surveillance cameras and card readers, Wi-Fi, and vehicle detectors of car navigation systems.

These life logs of our own, scattered in devices and databases, as a whole formulates digital twin of our society, and we have already gained benefits from data mining and simulation. Differently from Orwell like dystopia, consumers voluntarily give their buying history and take recommendations. Then, how does this change meaning of our experiences?

I will try to find a clue to the question in the traceability and behavioral targeting system developed in the field of commodity marketing. In Japan, the notion of traceability and product identification have received major attention especially in agricultural industry since the BSE affair in 2001, when infected cattle were discovered in local cities. The beef traceability law enforces that each product should be controlled at all stages of production, slaughter, and distribution with an identification code, which enables consumers to specify items and trust in their safety.

Now, we, human beings, yield to the traceable system. Instead of saying hello to the acquainted guard and being let in on sight (*kao* pass), we are supposed to prove ourselves with preregistered biometric information. Not I myself, but my data twin proves my authenticity. Trustworthy is not direct subjective feeling and evidence of our own, but our copy, behavioral profile and traceable records.