Balancing Advanced Information Services with Privacy Protection by Personal Data Anonymization and Data Fingerprint Technologies

Abstract

Information devices and sensors of every kind are connected on the network. Information is being digitized and distributed, allowing anyone to access it anytime. As a result, integration between information space (Cyber space) and the real world (Physical world), or in other words, a Cyber-Physical Integrated Society (CPiS), is being formed.

In this society, Human and social activities at the physical world are reflected in Cyber space. The power of information is expected to bring about data-driven information services. We are researching and developing social systems that sense human and social behaviors, analyze life-log data, synthesize information services, and provIDe feedback quickly and in a timely manner.

Difficulties in human and society, we have to subjective decision-making, based on partial data and incomplete knowledge. To support rational decision-making, we are researching technologies that make it possible to synthesize diverse and massive amounts of digital data collected from the Web, smart phones and SNS. We are creating a new Big Data-centric human and social sciences (DcS) based on the analysis of data and the synthesis of service.

We have realized; [1] Web data driven tourism policy and disaster prevention policy making support systems, and its application disaster-mitigation policy making, [2] ID Data Commons that is able to be protecting and utilizing Personal Information (PI) for big data driven ICT innovations.