ETH Zürich
Prof. Dr. Dirk Helbing
Chair of Sociology
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Clausiusstraße 50
8092 Zürich

October 26, 2011

Dear FutureICT Principal Investigators,

This letter is to express my interest in being a regular participant in FutureICT and to exchange data and platforms freely in exchange for the benefits of a truly global collaboration. My specific interests and unique capabilities are in

(1) **Theory and mathematical modeling of decision cascades**, e.g., `tipping point' phenomena, particularly as applied to economic bubbles, purchasing behavior, and corporate decision making. We have unique resources in this area, including:

* Data from the world's largest trading social network, which lets us examine the trading behavior of 1.5 million people as a function of the pattern of information flow between them.

* Credit card data for 10^8 anonymized consumers over a period of seven years, which lets us examine behavior pre- and post-recession and to examine financial behavior as a function of local conditions within more than one hundred large cities.

*Corporate social network data from 25,000 individual companies, including the development and traffic patterns of these electronic social networks over time.

We have established a collaboration with Professors Didier Sornette and Dirk Helbing of ETH Zurich to leverage our resources.

(2) **Reality mining** of everyday life, with the goal of understanding how different channels of communication and different social features influence decision making. To support this research we have developed a unique sensing system and several unique data bases that include both the flow of information along different communication channels and behavioral patterns within several different domains for all the members of several medium size communities. This data has been collected based on informed consent and includes face-to-face communication, email, facebook, sms, and other communication channels, along with physical behavior (mobility, body motion), purchasing behavior, health behaviors (sleep, flu, mood, etc) as well as background information such as personality, group membership, work, hobbies, etc.

We have established a collaboration with Professor Paul Lukowicz of the University of Passau to leverage our resources.

(3) Because **privacy** is such a major issue for this work I have established a major project with the World Economic Forum that supports an in-depth dialogue between Ministers and Department Secretaries of the EU, UK, and USA, along with CEOs of many of the Fortune 500 companies, and a wide variety of Non-Governmental Organizations that are concerned with privacy issues. As part of this project we will be building open-source reference implementations of novel privacy mechanisms, deploying and testing them within volunteer communities, and then evaluating these suggested new standards. We have strong support, including financial support, from EU corporations for this activity and would be happy to include FutureICT researchers in the deployment and evaluation of these new open-source privacy mechanisms.

Sincerely,

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