

The Super Identity Project

Project Aims

A recent assessment by the National Fraud Authority estimates the cost of UK identity fraud to exceed £2.7 billion a year. This affects up to 1.8 million people with much of the impact directly hitting the public purse. In a criminal context, identification of the wrong suspect can contribute to the criminal trial, conviction and sentencing of an innocent party together with a failure to pursue the true perpetrator. As a response to these two issues, the Super Identity project will provide a framework, which incorporates an augmented reality user-interface, and which moves beyond any existing work through the combination of information from both real and cyber domains. As such, the Super Identity project will aim to:

1. Provide an informed identification decision, combining real world and cyber measures
2. Quantify the (un)certainty associated with the final identity decision
3. Develop a more comprehensive academic understanding of the facets of identity

Methods

Factors of interest

Guided by the needs of a range of academic disciplines and professional users, we will identify the measures of interest that will inform our Super Identity model. Candidate factors will encompass both real-world and cyber measures.

Quantifying Identification

Empirical work will quantify the accuracy and certainty of identification from each measure so as to establish the limits of human and machine identification across a range of contexts. The use of real-world and cyber measures at this stage will provide a rich and novel basis for subsequent identification. Critically, we will also explore issues of legal, social and ethical acceptability given the changing views of personal privacy and information-creep.

Model creation

Data will be combined to provide a single identity-decision informed by the reliability associated with each individual measure. In particular, where reliability is sufficiently low, the capacity will exist to exclude inputs, so as to reflect the best available evidence, and to target additional information-gathering. Innovative visual interfaces will enable a user to obtain identity-related information within an augmented reality display, enabling real-time feedback to meet user-needs.

Outputs

The Super Identity project will provide an interactive visual interface to improve identification decisions. This can be implemented in a variety of security and intelligence situations, with the aim of detecting and reducing fraudulent activity. The project will also help law enforcement to have more certainty in their identification decisions, and to better direct their resources where information is lacking. Given the use of real-world and cyber measures of identity, one novel and exciting capacity within the Super Identity framework is the ability to identify groups of people as well as individuals. For instance, the Super Identity approach will be capable of indicating where seemingly unrelated people in a crowd are actually linked in online groups. This exceeds existing capacity, and offers a powerful and novel development in our understanding of identity.