**SuperIdentity: The Aims**

The SuperIdentity (SID) project is a multidisciplinary and multi-site project which offers an innovative and exciting new approach to the concept of identity. The assumption underlying our hypothesis is that whilst there may be many dimensions to an identity – some more stable than others - all should ultimately reference back to a single core identity or a ‘SuperIdentity’. The obvious consequence is that identification is improved by the combination of measures.

**SuperIdentity: The Novelty**

Predicting the Unknown: Through establishing demonstrable associations between different identity measures, we can use a known piece of information to predict another previously unknown piece of information. This offers significant value to security and intelligence services.

Quantifying the Risk: Through quantifying the certainty associated with an identification decision, we can enable the end-user to have a level of confidence (or risk) in their decision, and to make a judgement as to whether additional information is required.

Fusion of Real and Cyber Metrics: Through including measures from both the real and the cyber world, we go further than any other project. Indeed, as perhaps the fastest growing identity domain, and the fastest changing means of self-representation, cyber-identity must not be ignored. In this way, SID offers a forward-thinking framework to identity and identification.

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**Our Methodologies**

The SuperIdentity methodology relies on the development of three important sources of data. These reflect the importance of metrics or cues to identity, the importance of user requirements when working with identity, and the importance of social understanding and acceptability together with legal awareness when enquiring about identity.

**The SuperIdentity Stimulus Database**

The SuperIdentity Stimulus Database will deliver a database from 100 individuals who will provide biographic, biometric, cybermetric, and personality data. With all data points coming from the same individuals, the capacity exists to cross-correlate one piece of information with another to determine predictive value across biographic, biometric and cybermetric indices of identity.

**The Expert User Cohort**

The Expert User Cohort directs the functional requirements of the SuperIdentity framework. Through semi-structured interviews, their insights have helped to inform both the data to be gathered in the SuperIdentity Stimulus Database; and the flexibility and customisation of the SuperIdentity model itself.

**The Participant Cohort**

The Participant Cohort will follow our project across a two year period and will reflect on the social acceptability of a SuperIdentity framework, and the levels of education or risk-taking that individuals show to their SuperIdentity information. With them we will also explore issues of trust and privacy as well as rights and legal understandings.

**Our Preliminary Findings**

Exploration of the Spectator is being conducted by the Southampton team. It will tell us whether we should, for example, trust an identification from X more than an identification from Y.

Exploration of the Subject is being led by the Dundee team. It will tell us whether some biometrics are more valuable than others given their reliability across changes in an individual’s age, health, genetics, occupation, or cumulative environmental influences.

Finally, exploration of the Sample is being provided by the Kent team. It will inform us as to whether we can still trust an identification from a given biometric, despite challenges in its visibility or clarity.

Colleagues at Bath, Leicester & Southampton have been involved in the exploration of identity across offline and online contexts. The question here has been ‘how do people represent themselves in different settings?’ Changes in the rules of engagement across these contexts fundamentally affects rules of self presentation, and we should not assume that offline and online contexts are equivalent. Nevertheless, it is possible to gather meaningful information about a person from the way that they interact online and this links well with the more traditional biometric measures.

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**Our Deliverables**

The Oxford team have been instrumental in creating a mathematical framework, based on Bayesian principles, which allows information to be combined so that logical questions can be asked. For example, given facts A and B, can I find out C?; and given a desire to find out fact C, what information do I need? Detailed visualisation work at PNNL enables the user to interrogate this resultant framework. This framework enables us to weight the value of information, the source of information, or the trust in a piece of information. This enables an index of certainty to be attached to an identification decision. This framework additionally offers the intelligent capability to go further, using known information to predict previously unknown information, to support identification decisions.

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