**PhD Research Project**

Enhanced, Verifiable and Auditable Intelligence Interface between the Scottish Police and Community Partners with Time Critical Intelligence Information

**Supervisor: Professor Bill Buchanan** Edinburgh Napier University

**PhD Student: Omair Uthmani** Edinburgh Napier University

            [**Personal website: Bill Buchanan...**](https://web.archive.org/web/20130704124137/http%3A/www.soc.napier.ac.uk/content/page/people/peopleid/79#Main)

**Summary:**

This proposal has been developed with the direct input of the Scottish Police, and has resulted in a proposal which should produce high quality research which fits-in with current priority areas, such as related to terrorism, fraud and child protection. Several types of crime require time-critical intelligence information, where information should be acted-upon within a given time limit, and this research aims to understand the type of intelligence that requires to be passed in these cases, and the work practices of these involved.

At its core is the development of an IT framework/model which will support the two-way passing of intelligence for time-critical intelligence information between the police and their community partners, such as for Health, Fire, and Welfare in a verifiable and auditable way. There are several areas in which this research will make a contribution to knowledge, including: the formal definition of intelligence information that flows between the police and community partners; the roles and work practices within the police and their community partner; the security and privacy protecting applied to the intelligence information; the tagging of time-critical intelligence information for enhanced searching; and the methods used to process this information into a useable format. A key focus will be on developing user interfaces for key roles, and also in embedding security into the storage, transmission and processing of time-critical intelligence information. New methods will be used that support the sharing and searching of intelligence information, and in protecting intelligence information. The research will be conducted in the Centre for Distributed Computing and Security, which is a thriving and multi-skilled research group, which has an excellent reputation, and has won several awards, for their knowledge transfer activities. It will also be a key objective of the research to define best practice in the sharing of intelligence information around Scotland, and wider. Along with this, the proposal fits-in perfectly with the aims of the Evidence and Investigation network, within the SIPR.

**Aims & Objectives:**

The main aim of the research is to define and implement the formal procedures and the information that would flow between the police and their partners, especially in targeted areas such as child protection, community safety, and so on. Overall the objectives are:

* Perform a risk assessment for the key areas of intelligence gathering, at the interface between the Scottish Police, and the Community Partners.
* Define time-critical events, and their associated time-line, along with the message flow that would be required.
* Implement privacy protection to protect original sources of intelligence data.
* Identify work practices for time-critical intelligence information, and identify best practice for interfaces to Community Partners from around the police forces, especially in Scotland.
* Define and implement of an audit trail system and timeline system which allows for the procedures to be enhanced, for the future.
* Provide enhanced security and to distribute and data mine key data to enhance the intelligence gathering facilities.
* Establish an IT framework to define information exchange procedures and establish the data which could be exchanged between Police, Fire, Health, Welfare, Administration and Community services.

**Publications:**

[**Context-aware policy definition, modelling and implementation for novel information sharing architecture between police and community partners**](https://web.archive.org/web/20130704124137/http%3A/www.sipr.ac.uk/downloads/AnnRep2011/Information_sharing.pdf) (SIPR Annual Report, 2011)