

Scottish Centre of Excellence in Security and Cybercrime

Context

As the Internet, and the creation, storage and consumption of electronic information, increases by the day, it is important that we create an infrastructure which has high levels of security and trust. Without these the Internet will not truly scale to encapsulate every aspect of our lives, and leave threats to the future economy and to our own personal integration with it. This proposal aims to bring together knowledge from many different domains, such as from academia, industry, the public sector, and law enforcement professionals, in order to create a World-leading centre of Excellence in Security and Cybercrime. Its overall vision is to improving the lives of the people of Scotland and NI, through excellence in research, knowledge transfer, and teaching. This includes the vision to create next generation systems which protect the rights of individuals, and which also to reduce the risks of our citizens in the face of threats that they are now exposed to. The overall collaboration will thus be in the most inclusive way possible, and will allow knowledge to flow across domains. Scotland has a great opportunity in that it has strong domain experience, especially with the financial services industry and in the Scottish Police, and could support collaboration across different institutes.

Current collaborators

The following are the lead collaborators for their organisations:

Police/Public Sector:

- Batey, Alan (Northumbria Police).
- Brown, Alan (North East Fraud Forum).
- Chris Mooney (Glasgow Community and Safety).
- Dickson, Mike (Scottish Drug Enforcement Agency).
- Rahman, Arshad (FSA).
- Russell Scott (National Intelligence Model Development Team).
- Thuemmler, Christoph (NHS/Health Care).
- Walker, Liam, National Hi-Tech Crime Unit (Scotland).

Academia:

- Buchanan, Bill (Edinburgh Napier University).
- Cairns, David (University of Stirling)
- Carson, Derek (Abertay University).
- Fyfe, Nick (University of Dundee).
- Georgieva, Lilia (Herriot-Watt University).
- Henderson, Tristan (University of St. Andrews).
- Just, Mike (University of Edinburgh).

- Schafer, Burkhard (Joseph Bell Centre, University of Edinburgh).
- Renaud, Karen (University of Glasgow).
- Weir, George (University of Strathclyde).

Industry:

- Gibson, Mark (Memex).
- Graves, Jamie (Inquisitive Systems).
- Hazelhoff, Roelfzema, Nicole (bSkyb).
- Hewitt, David (Ansec IA Ltd).
- Johnson, Graham (NCR Corp).
- Howie, John (Microsoft).
- Moffat, Alan (RSC2 Solutions).
- Morrison, John (Sapphire Ltd).
- Nesbitt, Frank (Tait Walker).
- Ogilvie, Alex (Object Associates).
- Pemble, Matthew (Idrach Ltd).
- Smith, Don (SecureWorks/DNS).

Current Supporters

The following are supporters of the proposal (full confirmation is awaited):

- Scottish Police/Scottish Institute for Policing Research (SIPR).
- SICSA (Next Generation Internet theme).
- Scottish Information Assurance Forum (SIAF).
- BCS Cybercrime Forensics SQ.
- Scottish Drug Enforcement Agency.
- FSA.

Objectives

The main aim of this proposal is to create a World-leading Centre for Excellence in Security and Cybercrime, which integrates teaching, knowledge transfer and research in the areas of security, digital forensics and e-Discovery, around Scotland and NI, for the protection of citizens against the risks that they currently face, and to promote wealth creation and enterprise by exploiting current knowledge in key domains. Its objectives are to:

- Become a World-leading centre of excellence for teaching, knowledge transfer and research in security, privacy/trust, digital forensics and e-Discovery.
- Provide a single entity for pooled-bidding for research, knowledge transfer and teaching funding, especially for EU grants and UK-initiatives.
- Stimulate interest within Scotland and NI on the risks that are posed by the Digital Economy, and in creating and advising on the best methods to reduce these risks.

- Integrate professionals and academics from around Scotland, who have a wide range of skills, experience and motivation, into the Centre, and provide vision to address key issues within business/domain partners.
- Integrate fully with police forces in the UK, especially with a focus on Scotland and NI.
- Propose funding models to the Scottish Executive on creating a World-leading Centre of Excellence.
- Create an infrastructure for business support around Scotland, in key areas such as financial fraud, e-Crime, e-Discovery, Cloud infrastructures, and so on, and to promote wealth creation by stimulating ideas for patents and product creation.
- Lead a bid, along with Scottish Police and industrial partners, for the BCS-supported Centre for Excellence in Cybercrime for the UK, and also for a regional centre for Scotland and NI.
- Create a collaborative academic network around Scottish universities for research, knowledge transfer and teaching, in order to share academic resources, and to collaborate with research/knowledge transfer initiatives.
- Provide the infrastructure, especially through collaboration with key domain partners and university collaborators, for research/knowledge transfer proposals, especially focused in widening collaboration around Europe and the US.

Additionally:

- Stimulate, encourage and support students into enabling them to become world-leaders and visionaries, and thus support the new industries of the future.
- Create CDP training, especially focused on integrating key domains for industrial/domain experience. This includes setting up a Digital Forensics Academy, and offer professional certification in Computer Forensics.
- Ensure that both undergraduate and postgraduate programmes around Scotland and NI have a strong academic underpinning, and integrate fully with the commercial, research and knowledge transfer activities of the Centre of Excellence.
- Fully develop material for a Scotland/NI-wide MSc in Security and Cybercrime, with world-leading teaching material, and which can be taken in a number of delivery modes, especially focused on blended learning.
- Setup funded secondments from the Police into academia/industry, and promote PhD research with industry, the public sector and law enforcement professionals, in order to exploit existing ideas for novelty.
- Share teaching material around Scotland and NI, and feed this into a European infrastructure, especially focusing on distance and blended learning material.