Poster Abstract:  An HCI Approach to Assessing CCTV

This poster highlights the current usability issues with video security systems used for surveillance. So far, video security research has predominantly studied the impact of CCTV on crime rates in the UK. However, in the last decade, two important changes have taken place. Firstly, the CCTV market has expanded dramatically and surveillance technology has transformed from analogue to digital rapidly. Secondly, CCTV is being used for a variety of purposes and goals by a wide range of stakeholders. Despite the increase in usage and the demand for CCTV as well as the technological advances, many systems are being used ineffectively, inefficiently and are not fit for purpose. This research focuses in one particular stakeholder group, CCTV operators. The effectiveness of digital CCTV video and the technology was addressed in two-parts: (1) Empirically, the identification of faces under various video quality conditions was assessed using HCI (Human Computer Interaction) methods such as observation and task performance with 30 participants. Performance reached above 50% with video encoded at a bit rate quality low as 52 Kbps; (2) Using a (STS) Socio-Technical Systems approach, observations and informal open-ended interviews with 26 CCTV control room operators from five city control rooms were made, to survey observation tasks and identify the key usability problems. From the field work, it was found that identification and search tasks were hindered due to a lack of system support tools. Furthermore, poor communication between operators and management created low morale and motivation. The qualitative findings will be combined with the empirical research to form a set of CCTV recommendations for a range of observation tasks to improve CCTV set-up.