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Company	Apical Technologies Ltd.
Research University	Loughborough
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Title	Design of a High Dynamic Range Surveillance-System and its seamless integration within a Complex-Surveillance-System (CSS)
Abstract	<p>The recent advances in sensor technology have resulted in the introduction of surveillance cameras with High Dynamic Range (HDR) imaging capabilities. However a key problem is the integration of these new generation cameras with existing, complex-surveillance-systems (CSS), comprising of standard compliant and legacy surveillance-systems. To this effect, factors such as technological incompatibility, operational/replacements costs and other user constraints need to be considered. Further the integration of any novel technology to the existing CSS requires a thorough investigation of the CSS's performance and operational properties, which should provide valuable constraints and/or design properties to the new technology and its interfaces.</p> <p>Therefore a new research project is proposed that will investigate the development of novel HDR image/video coding system that can be seamlessly and cost effectively integrated to the existing CSS. The existing expertise of the Department of Computer Science Loughborough University and Apical Technologies Ltd., will be utilized in this project. The project will focus on the following:</p> <ul style="list-style-type: none"> • Investigate the performance, design, integration, cost and application models of open source / standard surveillance systems and legacy surveillance systems that are fundamental to CSSs. • Specify, design and implement a novel HDR surveillance system so that it's performance and application within the CSS will be optimized. • Integrate the HDR surveillance system within the CSS and analyse it's

performance.

The project will follow strict systems engineering approaches to R&D. The successful candidate will be based in the Department of Computer Science, Loughborough University.