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**OLED Display US Patent Portfolio By Cambridge Display Technology  
to Be Sold by Munich Innovation Group**

Munich, Germany (March 3, 2015) – Munich Innovation announces the availability of a global patent portfolio relating to fundamental building blocks of organic light-emitting diode (OLED) display technology. Specific parts of the portfolio are also applicable to other display technologies such as LCD.

As a self-illuminating technology, OLED works without a backlight and therefore has advantages in contrast ratio, power efficiency and device thickness over other types of displays such as LCD. However, the limited lifetime of the organic materials has been the biggest technical challenge for OLED. This portfolio protects three essential aspects of OLED display technology: multi-line addressing (MLA), image processing and hardware architecture, with a central topic of improving lifetime and reducing power consumption of high resolution PM OLED displays.

MLA has been proved to be an effective solution to the lifetime issue. It is a technique that drives one or more lines simultaneously by taking advantages of correlations between luminescence of pixels in different rows. Therefore, the desired brightness of each row can be built up over multiple line scan periods with reduced peak drive level. In reality, halving the peak drive current of an OLED increases its lifetime by approximately a factor of four.

In addition to MLA, image processing technologies such as non-negative matrix factorization (NMF) have also proved to be effective. With NMF, an input image matrix is factorized into two factor matrices, from which sub-frames can be derived. Therefore, the display is driven with successive sub-frames that have significantly reduced average pixel brightness (i.e. drive level), while remaining at the overall perceived brightness.

Filed at the early stage of OLED industry between 2005 and 2008, this portfolio is a result of many years of R&D activities from CDT, a pioneer and a leading developer of OLED technologies and materials. This extensive patent portfolio consists of 12 patent families with 10 granted US patents. The value of these IP assets is highlighted by its global coverage of major display markets including the US, Europe and Asia. Coupled with its clear chain of ownership, the CDT portfolio offers unexploited licensing potential and IP risk mitigation.

“OLED market, driven by increasing demands in TV, smartphone and tablet sectors, continues to gain market shares from LCD”, says Dr. Stefan Taing, Senior Partner of Munich Innovation. “This portfolio therefore represents a valuable opportunity to capitalize on the market momentum building in favor of the thinner and power efficient OLED displays”.

Munich Innovation will shortly be approaching potential buyers or licensees of the patent portfolio with a detailed technology report and will be available to discuss the intellectual property in more detail.

To receive more information about this opportunity, please contact Dr. Stefan Taing at [st@munich-innovation.com](mailto:st@munich-innovation.com).



### **About Munich Innovation Group**

Munich Innovation Group GmbH is a leading service provider for intellectual property monetization and research on a global scale. Clients include publicly listed high-tech corporates, privately held companies, independent inventors, academic institutions and investors. The company offers IP licensing management, patent transactions and IP advisory services.

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