

Novel Card Tracking System for iKnowledge

TV poker benefits from infra-red ink technology

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Poker and other televised card games have become increasingly popular with the viewing public. However, a number of issues associated with traditional TV coverage have tended to hold back the games' real development potential. This is all set to change with the introduction of a novel card identification system developed jointly by Sagentia and our client iKnowledge.

Televised card games like poker have built a loyal following over recent years. But like snooker, which had to wait for the introduction of colour TV to really take off, televised poker has also been waiting for a breakthrough to realise its true potential as a spectator sport.

The traditional approach, involving over shoulder and/or under table cameras, is invasive and costly. Obscured or delayed views can result in delays and errors in identifying the cards, making captions follow behind the commentary and compromising the 'live' feel of the show.

iKnowledge Ltd, part of PA Sport, is a leading provider of automated, data-driven TV graphics for a range of televised sports. Satisfied that there was a strong market opportunity for a technology-based approach to card identification, iKnowledge approached Sagentia because of our knowledge and track record in magnetic tagging.

A number of different approaches were initially considered including magnetic tagging, capacitive and RFID-based technologies. While RFID satisfied many of the technical requirements, it was

discounted because the need for an embedded antennae and chip would have interfered with the card's thickness, flatness and 'feel'. It quickly became clear that an optical based system was the one most likely to succeed and meet iKnowledge's requirements.

Development work from the initial meeting to studio trials of the new card tracking system known as Perlego* took just eight months. We first developed a smudge and scuff-proof ink formulation, invisible to the human eye, but detectable under infra-red light. Individual cards with a unique 2D data matrix bar code were printed using the ink. Importantly, the 'look and feel' of the cards is identical to non-printed equivalents.

Standard cameras, with filters capable of reading the codes under infra-red light, are linked to a computer that can decode the barcodes. As part of the project we developed an image processing system which provides a continuous XML output stream to iKnowledge's TV graphics system. The system is configurable to allow a variable number of cameras to observe the player areas on the table, depending on the studio set up.

The benefit of this approach is that information can be delivered direct to TV screen from the moment the card is dealt. The system is faster, more secure and more accurate than the traditional approach. Costs are significantly reduced because fewer operators and observers are needed.

Commenting on the development, Kevan Moretti, Co-Founder & Commercial Director at iKnowledge, said: 'Perlego is a dramatic step forward in delivering the fastest and most accurate game play content on-screen. At the same time it offers producers a significant cost advantage for poker and card play productions. Together, iKnowledge and Sagentia have overcome some very challenging obstacles to deliver a really world-class solution.'

*iKnowledge's Perlego system includes the following patents [PCT Patent application DYC P024473WO; UK patent filing No. 0513904.3 USA patent filing No. 60/697,041]

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