

TCL Communication leads intelligent displays discussion at Mobile World Congress Shanghai

Electronics leader joins forces with experts from TCL China Star Optoelectronics Technology, DXOMARK and Pixelworks to predict trends and evolution of the intelligent display

Shanghai, 24th February 2021 – Today at the Mobile World Congress Shanghai (MWCS), global electronics giant TCL Communication provided audience with a roundtable session titled “What to look for of the next generation intelligent displays”. The discussion is moderated by Ben Wood, Chief Analyst & CMO of CCS Insight, and it brought together display experts from TCL Communication, TCL China Star Optoelectronics Technology Co., Ltd (TCL-CSOT), DXOMARK Image Labs and Pixelworks Inc., covered key topics around the future of displays and improving consumer experience, including multiform flexible displays, multi-screen trends, as well as visual enhancement and eye care technologies.



Next-generation of intelligent display roundtable discussion at MWCS 2021

Bringing intelligent displays back to the spotlight

As the development of new device concepts is heavily reliant on innovations in the display, since its inception, TCL has been adopting a core strategy which maximizes its investments in the innovation of intelligent displays.

“Screens are the second most expensive component of a phone, yet consumers often overlook the importance of a great display,” said Stefan Streit, General Manager of Global Marketing, TCL Communication. “At TCL, Intelligent Display has always been at the core of our device strategy, not only because of the importance of visual technology, but also for its essential role in device innovation. Throughout the years, we have been maximizing our investments in the research and

development of technologies around visual enhancement, eye protection, multiform flexible displays and multi-screen collaboration. Coupled with our industry-leading partners, we are able to integrate and commercialize display innovation across our smart device portfolio, empowering consumers to enjoy the latest technologies at competitive price points.”

Display innovation driven by industry collaboration

To champion the innovation of intelligent displays, TCL Communication works closely with industry innovators and experts to further improve visual quality and consumer experience.

“Technologies behind the display is important, but we should also focus on how intelligent displays can intertwine with consumers’ needs and satisfy their usage experience,” said Steve Kim, OLED Expert at TCL-CSOT. “For any intelligent display, be it TVs, displays on autonomous driving vehicles or AR/VR headsets, we need to focus on three core elements of design, performance and function, with the added bonus of reasonable price where possible. We believe that as displays evolve, it would expand into auto-service and virtualized with supported AR and VR features. In the autonomous driving vehicle arena, the intelligent displays in a car could even evolve into a user’s home, theater, restaurant, museum, hospital and office based on their needs.”

With the growth in mobile internet penetration, mobile phones not “phones” anymore. As 75% of the mobile data traffic¹ is driven by video content, the visual display performance of the man-machine-interface has become even more important,” said Ting Xiong, Senior Vice President, Sales & Marketing, Pixelworks. “To address issues around device inconsistencies and display-content gaps, from 2018, we have worked closely with TCL Communication to develop an independent display processor, Pixelworks processor i3, to optimize mobile video display experiences. This year, we are collaborating to further improve mobile gaming experiences with Pixelworks i6, the industry’s first AI-powered independent display processor. Together with TCL, Pixelworks believe this innovative display technology would bring ultimate value and therefore satisfaction to the consumers, for generations ahead.

“DXOMARK’s Display score is based on objective and perceptual measurement for relevant display quality attributes and representative use cases where Display makes a difference for the user experience.” said François Grandclerc, Display Quality Director, DXOMARK. “With new rollable and flexible displays, dynamic content adaptation to display size is a must for new devices. In addition, we focus on how display and touch smoothness impact user experience when scrolling and gaming, as well as smooth motion in videos and display rendering when streaming HDR content. The quantization effect around sharpness, color, brightness adaptation is also rigorously tested to ensure quality of the display.”

Four Core Pillars for Display Innovation

Speaking specifically on what the future holds for intelligent displays, Streit pinpointed four focus areas for TCL’s development of display technology:

1. Visual Enhancement

¹ eMarketer Research, 2018 <https://www.emarketer.com/newsroom/index.php/threequarters-video-viewing-mobile/>

As an industry leader in display technology, TCL is relentlessly raising the bar of display technology innovation by upgrading present software and inventing new technologies with the aim to offer users visual experiences that are out of this world.

The company has recently launched display optimization technology NXTVISION 2.0, which offers features such as true flesh tone and AI visual enhancements for crisper details on screens, providing premium visual experience at a competitive price point. The company has also equipped its latest smartphone lineup, TCL 20 series, with the propriety NXTVISION 2.0 display technology.

2. Eye-Care, Eye-Protection

NXTVISION provides consumers with not only premium visual enjoyment, but also eye-care technologies at competitive price points. It comes with TÜV Rheinland certification for low blue light as well as various eye-care modes. The company's latest technology NXTVISION 2.0 will offer even more eye care enhancements features including improved brightness adaptivity.

Non-light emitting screens are one the best eye-protecting displays, but the sole option on the market is e-ink technology, which only produces images in limited color tones. NXTPAPER, a TCL proprietary technology, on the other hand, displays visuals in full color to provide eye-friendly videos for the first time while ensuring the same level of eye-comfort as traditional e-ink readers. Not only does NXTPAPER allow for 25% higher contrast than most e-ink tablets, but it also provides 65% more power efficient than standard LCD screens. TCL just launched its first tablet using NXTPAPER technology at CES.



TCL NXTPAPER Tablet

3. Multiform Flexible Display

Ben Wood, Chief Analyst at CCS Insight and moderator of the discussion noted: “Enabled by new display technologies, smartphones are changing shape. Foldables and ‘rollables’ are starting to appear, with a growing number of products being commercialized or at least conceptualized.” He continued: “Manufacturers are preparing for a new era of smartphone design and the smartphone world is no longer just flat”.

To drive the industry forward with cutting-edge innovations, TCL continues to pioneer the development of foldable androllable devices embedded with TCL-CSOT display panel technology. This includes a tri-fold tablet concept introduced last year as well as a 17-inch printed OLED Scrolling Display officially launched in January that is only 0.18mm thick. In terms of commercialization, the company said that it is planning to introduce TCL’s first flexible display device phone later this year.



TCL trio-fold concept phone and 17-inch printed OLED scrolling display

4. Multi-Screen Collaboration

TCL is dedicated to delivering stronger integration to shift towards a cohesive portfolio of consumer electronics devices that work seamlessly with one another. Embracing its AI x IoT strategy, TCL is developing a smarter device ecosystem for consumers around the world. Multi-screen collaboration features will allow TCL device users to become early adopters of cross-screen experiences, where they can interact seamlessly and simultaneously with their smartphones, TVs, PCs, as well as future tech innovations such as near-to-eye display, smart refrigerator screens, smart mirrors and more.

For the full recording of the round table, please visit:
<https://www.youtube.com/watch?v=EifRHDJcV44&feature=youtu.be>

About TCL Electronics

TCL Electronics (1070.HK) is one of the world's fastest-growing consumer electronics companies and one of the world's leading television and mobile device manufacturers (TCL Communication is a wholly-owned subsidiary of TCL Electronics). For nearly 40 years TCL has operated its own manufacturing and R&D centers worldwide, with products sold in more than 160 countries throughout North America, Latin America, Europe, the Middle East, Africa and Asia Pacific. TCL specializes in the research, development and manufacturing of consumer electronics ranging from TVs, mobile phones, audio devices and smart home products as part of the company's "AI x IoT" strategy. For more information on TCL mobile devices, please visit: <http://www.tcl.com/global/en.html>.

TCL-CSOT is a sister company of TCL Communication, a subsidiary of TCL Technology, which is dedicated to driving greater innovations in semiconductor display. For more information please visit: <http://en.szcsot.com/>. For more information about Pixworks and DXOMARK, please visit: www.pixelworks.com and <https://www.dxomark.com/tcl-10-pro-display-review-taken-to-extremes/>.

Media Contact
tclpress@tcl.com