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TOPPAN SECURITY LAUNCHES NEW LASER COLOUR TECHNOLOGY FOR ID DOCUMENTS: **CHROMA**

TOPPAN Security, a global leader in secure identity and payment solutions, today unveiled CHROMA at the ICAO TRIP Symposium, the world's first laser technology to deliver full-colour, photo-realistic, personalisation for polycarbonate identity documents.

For three decades, governments issuing identity documents have been faced with a dilemma: they either had to prioritize the integrity of the picture or focus on the high resolution and quality of the portraits. Having both was impossible. CHROMA redefines how identity is protected and portrayed on official identity documents, achieving **exceptional document security with high-precision visual quality**.

"CHROMA brings identity to life with unmatched realism and precision, delivering lifelike imagery on secure polycarbonate documents that exceed today's security benchmarks," said Jean-Pierre Ting, President of TOPPAN Security.

Why CHROMA Sets the New Global Standard

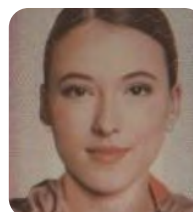
Black and white laser engraving has been long the gold standard for secure document personalization. Unlike surface printing methods that merely apply ink or dye to the exterior, laser engraving permanently embeds personal data and portraits deep within the **polycarbonate structure** of the document. This fusion creates exceptional durability and resistance to tampering, alteration, or environmental wear.

Black-and-white Laser Engraving



While **colour personalization technologies** have emerged in recent years, the existing technologies all come with significant drawbacks that have delayed adoptions. As a result, only around 20 countries worldwide have opted for colour portraits to date on polycarbonate.

Colour Laser and Colour Inkjet



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CHROMA changes that. It redefines what's possible in colour personalization, combining the trusted security of laser engraving with vibrant, lifelike precision that enhances recognition, not distracts from it.

The CHROMA technology fuses **photosensitive cyan, magenta, and yellow dyes with a single precision laser beam**, achieving true polychromatic engraving **directly within the polycarbonate structure**. The result is a tamper-proof colour image that captures the tones, textures, and subtleties that make every face unique.



Why Colour Matters for Modern Identity Verification

Colour is not just for aesthetics; it is fundamental to human recognition and identity verification. We distinguish faces through skin tones, eye colour, and subtle features that define individual identity.

At border control, **officers see travellers in colour**, while the **person's image**, stored **on the chip** of a travel document, also **appears in full colour** on the officer's screen[NT1.1][FJ1.2]. For optimal verification, **the personalised portrait** on the document must **reflect the same colour realism** as both the person and the chip image.

CHROMA ensures alignment across all three verification points producing a personalised image that mirrors both the chip data and the individual standing before the officer. This enhances recognition confidence and streamlines verification processes.

"Identity documents must do more than fraud prevention, they should preserve the truth of who we are," said Frederic Jacquot, Director & Head of Product ID Documents. "CHROMA provides the authenticity and assurance that governments and citizens require."

ABOUT TOPPAN SECURITY

TOPPAN Security is a global leader in systems integration and mission-critical identity and payment technologies, providing advanced solutions that enhance security, trust, and efficiency. It serves as the international development arm of the TOPPAN Group, focusing on advancing security solutions across global markets. The company specializes in secure document and card manufacturing, biometric authentication, encryption, and identity verification solutions, supporting governments and businesses in building resilient digital ecosystems.

Through partnerships with governments and businesses worldwide, TOPPAN Security continues to push boundaries, set industry benchmarks, and develop cutting-edge technologies that enhance physical and digital security and transform citizen experiences.

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