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Theme Story - A Wave of Virtual Products is Sweeping the Globe How It Could Redefine the Future of the Film and Television Industry

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/ THEME STORY /

A Wave of Virtual Products is
Sweeping the Globe

HOW IT COULD REDEFINE THE FUTURE OF THE FILM AND TELEVISION INDUSTRY

虛擬製作席捲全球
改寫傳統影視產業未來

TEXT / YEUNG TSUI YI PHOTOGRAPHY / SHAW STUDIOS



Since its inception, the film and television media has existed squarely at the juncture of art and technology. Media forms like music videos, streaming services and even blockbuster Hollywood films have exemplified this inextricable link. In the past three to four years, though, virtual productions have swept through the world and have been described by insiders in the United States and Europe as marking a "point of no return" for the overall industry due to their real-time ability to produce special effects content. Such technology is gaining momentum in Hong Kong too. In March 2024, an international-level professional virtual production studio officially opened in the city, ensuring that local production is keeping pace with the rest of the world.

融合藝術與科技是全球創意產業新趨勢，以影視製作為例，不論荷里活電影、串流劇集，以至音樂視頻等，與科技經已密不可分。近三至四年，能高效製作出實時特效內容的虛擬製作 (virtual production)，更被歐美影視界形容為「一條不歸路」，應用與日俱增。在香港，隨著國際級虛擬製作錄影廠於2024年3月正式啟用，意味本地製作的發展里程，正與世界各地亦步亦趨。

Hong Kong's largest virtual production studio: Training talent with the latest in technology

After nearly four years of preparation, the Hong Kong Design Institute (HKDI), the new studio is currently the largest virtual production studio providing international-level professional virtual production education and shooting facilities in Hong Kong. Housed at Shaw Studios, this 9,000-square foot facility is equipped with comprehensive professional software and hardware, plus basic facilities like control rooms and workspaces. Some highlights include a sophisticated Samsung "The Wall" microLED display with ultimate ultra-high resolution (8K) and pixel pitch of 1.68mm fineness; an ARRI camera and lighting system acclaimed by the film industry and the disguise advanced computer software solution that supports extended reality (XR). Users can instantly integrate virtual and real scenes in the studio, handling up to six scenes simultaneously.

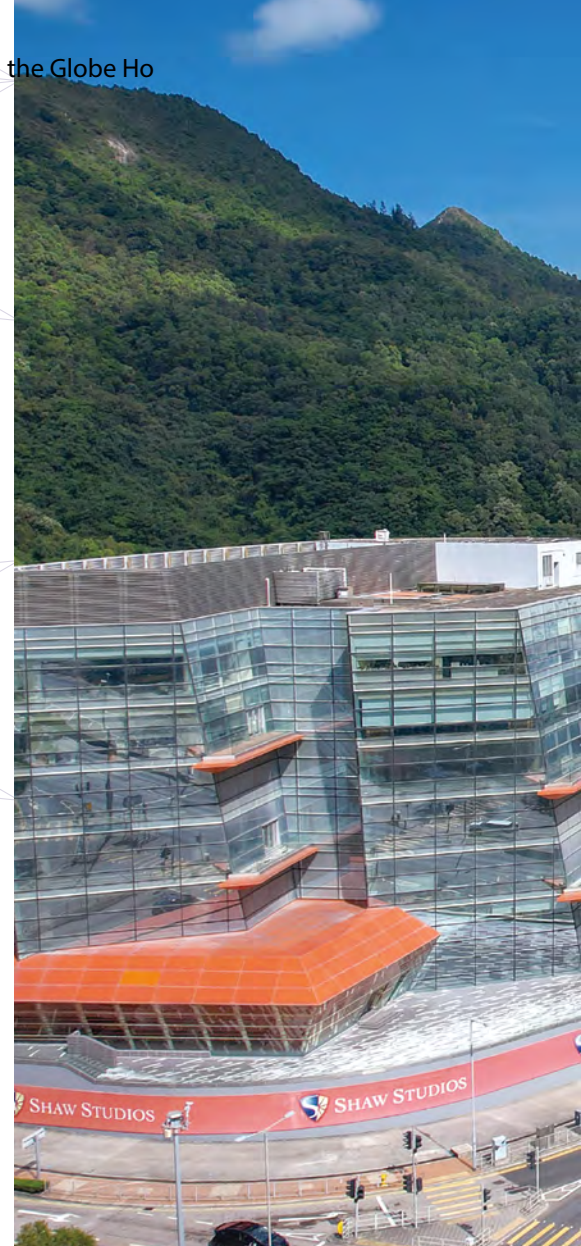
"To excel in filmmaking and its latest techniques, students must be provided with high-standard tools that enable them to enhance their competitiveness and match international professional standards," says Terence Wong, Head of Academic Development at the HKDI. He expects that the new studio will offer students an international learning

experience, preparing them for a future beyond Hong Kong.

"Virtual production has been a global focal point since around 2020. It has become increasingly widespread in the United States and Europe; producers have joked that it represents a 'point of no return' and have been incorporating it into their production lists," says Wong. Virtual technology now accounts for 70% of the visuals across numerous streaming series. Wong believes this will soon become a norm, leading to an increase in demand for relevant talent. "Recent data from the United Kingdom indicates that less than 50% of film professionals have six months or more experience in virtual production. It is a similar situation in other major film industries worldwide." The HKDI empowers students studying these skills to seek internship opportunities further afield — including in mainland China, where significant advances have been made in high-tech film technology and local productions.

Forging ahead: Fostering a community of film and television professionals

In response to this growing trend, the HKDI Media Lab has been actively improving student training opportunities to align with global mainstream standards since 2021. The virtual production studio was a logical next step in that direction.



"Technically, Hong Kong is still in the exploration stage, and it might lag behind more mature regions. However, we are on par in terms of creativity and production capabilities," says Wong. He believes that the facility will inspire future creative talent and elevate their production quality.

"We are discussing how the film industry, the HKDI faculty and the students can all collaborate through virtual production. Two former students who are currently working in the film industry are spearheading these efforts, with preliminary conclusions expected shortly."

He hopes these technological advancements will play a crucial role in nurturing talent. Future graduates will be taught to combine creativity with the latest technology to come up with more distinctive, high-quality productions.





How virtual filming can help the industry achieve Environmental, Social and Governance (ESG) goals

Shaw Studios, which has joined forces with the HKDI on building this virtual production studio, hopes that pioneering this top-notch virtual production technology and systems will benefit the local film industry and connect with the world. Helena Young, Director of Production Services and Marketing of Shaw Studios, says that everyone is eagerly anticipating the day Hong Kong can produce more advanced films.

"Using virtual technology in film production is imperative," Young says. "Compared to traditional filming methods, virtual production not only consumes less time and actual costs but also facilitates the implementation of Environmental, Social and Governance (ESG) principles."

For instance, the virtual effects created

through virtual backgrounds can mimic the look of real-world locations. This means that films that would have previously required on-location shooting can now be completed without the cast and crew having to travel to the actual sites. Additionally, art and props teams no longer need to construct large physical sets—instead, a scene change can be virtually created with new technology. It saves significant time, manpower and resources, which in turn reduces waste and improves sustainability.

"The filming process is often hindered by external conditions like weather or timing, a sunrise or sunset moment in the script. Virtual shooting eliminates these constraints, allowing outdoor scenes that normally take weeks to be completed in just days. The real-time integration of virtual elements such as instant colour grading and setting changes reduces time and effort spent on post-production as well, increasing production flexibility," Young says.

TERENCE WONG

黃培達

Head of Academic Development

at the HKDI

香港知專設計學院學術發展主管



HELENA YOUNG
楊勉恒

Director of Production Services and
Marketing of Shaw Studios
邵氏影城製作服務及市場推廣總監



**Developing diverse skillsets to
create high-quality productions**

Young predicts that the widespread use of virtual production tools will drastically change industry workflow. For instance, a sizeable percentage of post-production work will move to pre-production, resulting in changes to long-standing post-production roles.

"The industry is highly enthusiastic about using this new technology in film production," Young says. "As many studios worldwide are embracing this trend by setting up virtual production facilities, in Hong Kong too there is a strong desire to soon produce its first virtual film."

She hopes that young people with virtual production skills will embrace the rich experience of industry veterans to create new masterpieces. Together, they can maintain the continued brilliance of Hong Kong's local film and television industries, bringing art and technology to a beautiful fruition.

**全港最大虛擬製作錄影廠
「軟硬兼施」培育人才**

由香港知專設計學院 (HKDI) 耗時接近四年籌劃的虛擬製作錄影廠，是目前全港最大型的虛擬攝製技術教室及拍攝場地，這個位於邵氏影城的影棚，佔地 9,000 平方呎，內裡專業軟、硬

件設備一應俱全，包括：控制室及工作間等基本設施、像素細緻度達 1.68 毫米的 Samsung 巨型 microLED 屏幕牆、被電影業界譽為「頂級神器」的 ARRI 攝影及燈光系統、以及可支援延展實境 (XR) 的 disguise 先進電腦軟件解決方案，令大家可在錄影廠內，瞬間結合虛擬場景與實景，並可一邊拍攝，一邊處理多達六個場景，方便整合不同製作內容。

「工欲善其事，必先利其器，想培育精於影視新科技的人才，製作出優質作品，就要向學生提供高水準工具，以便他日與世界各地專業標準看齊，提升競爭實力。」香港知專設計學院學術發展主管黃培達 (Terence Wong) 預期，嶄新的錄影廠可為學生帶來國際級學習體驗，為日後衝出香港，作好準備。

「虛擬製作在 2020 年左右於全球熱議至今，歐美等地的應用已愈來愈廣泛，各大小監製並笑稱，這已是一條不歸路，創作影片時，都會將虛擬技術列入製作清單之中。」以他所見，早在兩、三年前，不少於大型串流平台上架的劇集，有七成畫面也由虛擬技術生成，他認為，在不久將來，此製作模式將成為恆常化的工作流程，與此同時，業界對相關人才之需求，只會有增無減。

「英國近期公布的數據顯示，擁有六個月或以上虛擬製作經驗的電影從業員，人數比例不足 50%，求才若渴之





程度，可想而知；類似情況，在各大影視產業國亦然。」因此，他鼓勵正努力拿捏該項技能的同學，放眼世界不同國度，包括在高科技電影技術上破繭而出的中國大陸，爭取實習機會，拓闊視野，才可進一步推己及人，優化本土創作。

以前瞻視角 打造影視專才搖籃

藝術科技既是大勢所趨，為了讓學生與時俱進，鏈接高水平影視製作，學院媒體研究所早於 2021 年，積極探索如何在新技術層面，加強對同學的培訓，以回應世界主流。經過與電影業界的連串商討及多番測試，最終認定成立虛擬製作錄影廠，是一個可行方向。

「論技術，尚處於摸索階段的香港，可能會略遜於其他發展較成熟的地區，然而在創作及製作能力方面，彼此其實不相伯仲。」Terence 相信，隨著虛擬製作錄影廠塵埃落定，對培育創意人才、提升攝製水平，將帶來鼓舞作用。

「目前我們正就電影業界與 HKDI 師生如何攜手實踐虛擬製作，展開探討，兩名現職電影工作的學院舊生，對於相關合作及支援細節，已進行得如火如荼，預期即將有初步定案。」他期待在可見未來，設備先進的錄影廠能

發揮培訓人才基地角色，畢業生可學以致用，將創新思維與高科技結合，製作出更多別具特色的水準之作。

虛擬拍攝 有助業界實踐 ESG 目標

為 HKDI 提供空間，玉成虛擬製作錄影廠美事的邵氏影城，期望這個先行先試的教學場地，可為業界注入新血，進一步推動本地電影創作，與世界接軌。影城製作服務及市場推廣總監楊勉恒 (Helena Young) 表示，由於香港至今仍未有電影這類製作，所以大家都引頸以待。「在攝製影片流程中使用虛擬技術，已是勢在必行之事。」她前瞻：「因與傳統拍攝方式比較，虛擬製作所花的時間及實質成本，不單止相對較低，並且有助實踐環境、社會和企業管治 (ESG)。」

例如，由虛擬背景製造出來視覺效果，如臨實景，這令本來需要在外地取景的影片，不用演員及製作團隊親赴現場，也可順利完成。另外，有了虛擬製作後，美術及道具組人員再也毋須大費周章，在錄影廠搭建大型實體背景，任何千變萬化的場景也可透過新技術打造，不僅省卻了不少搭建實景的時間和人力物力，亦可避免製造廢料，無形中為環保出一分力。

「電影的拍攝進度很多時會因天氣而

受阻，又或工作團隊為了捕捉日出、日落等「魔幻時刻」而苦苦等待，採用虛擬方式拍攝後，便不用受時間所限，可以令一些原本需時數星期的外景拍攝，在數天內大功告成。加上真實與虛擬元素合成的特殊效果，能實時呈現出來，還可即時調色、變換場景氛圍及作其他修改，大家便不用花大量時間與心力，在後期製作工序上，換句話說，不論攝製效率及靈活度，亦大為提升。」

多元人才共融 推動行業高質發展

Helena 預料，當虛擬工具被廣泛使用後，整個工作流程將出現翻天覆地改變，最大的轉變是，由於不少影像是於正式拍攝前創建，換言之，大部分後期製作將變為前期工夫，連帶一些原屬後製的崗位，亦可能有調動。

「目前業界對使用這種新科技製作影片的意欲高漲。」她稱：「當大家得悉世界各地不少傳統片廠也加設了虛擬製作影棚，蓄勢待發迎接今次的大趨勢時，均殷切盼望香港可盡快有第一部虛擬拍攝的作品出現。」

她希望兼收並蓄虛擬製作技術的青年人，在不久將來，可將他們的技能，跟業界一眾前輩的豐厚資歷融合在一起，攜手創作出一部又一部叫好叫座的殿堂作品，令本地影視創作持續閃亮。