Exploring the Potential Use of Holographic Technology Through Remote Communication Technology in the Malaysian Courts: A Legal Perspective

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ABSTRACT

A hologram is a three-dimensional image created by a laser beam. It is produced by using technology such as 3D scanners, cameras, and computer-generated models. Holographic technology has the potential to revolutionise the way court proceedings are conducted in Malaysia by making it easier for witnesses and victims to provide testimony and for lawyers to present cases more vividly and engagingly. Judges could also be represented as artificial creations without the presence of an actual judge in a courtroom whose image is beamed to a mobile phone or any other device. This research aims to analyse the existing legal provisions that permit the utilisation of remote communication technology for court proceedings and examine the adequacy of the statutory provisions to enable the use of holograms in a virtual court setting in Malaysia. The paper highlights the key judicial reforms that have been undertaken by the Malaysian judiciary through the use of technology. However, the paper concludes by arguing that initiatives and efforts must continue to be implemented from- time to time to enhance the efficiency of the Judiciary at all levels and to improve the delivery system.



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1. INTRODUCTION

In 1947, Dennis Gabor, a Hungarian-British physicist, laid the groundwork for the modern hologram theory.¹ During the 1950s, over 50 publications were written about Gabor's technique.² His research enabled a two-stage method for producing optical images. The first step involved illuminating an object with a coherent monochrome wave, and the diffraction pattern caused by the interference of the object's second coherent wave with the coherent background recorded on a photographic plate. If this processed plate is placed back in its original position and only the coherent background is lit, the object will appear in the original position behind the plate.³ A simpler explanation is that a hologram is a two-dimensional representation of a three-dimensional object. Gabor's work was an important contribution to the development of holography.⁴ First invented in 1962 by Russian Scientist Yuri Denisyuk, holographic technology has come a long way in the past 50 years.⁵ What was once an unbelievable 3D image projection has now evolved into 7D live video projections in full, vivid colour. This ground-breaking technology now has the capability to project the subject with crystal clear audio and visual clarity in real-time.

Ever since their initial experiments, holograms have been a highly beneficial resource in a variety of fields, including medicine and legal matters, such as the drafting of wills. According to Black's Law Dictionary, a holograph deed or writing is one that is composed and signed entirely by the grantor's hand.⁶ This technology provides a unique three-dimensional projection that can be viewed without any special equipment, such as glasses or cameras. Holograms can be either static or animated, allowing multiple people to watch the same sequence from any angle. Furthermore, the use of hologram lenses allows for a more compact system configuration and the magnification of displayed images. These features make holography a highly versatile and useful tool for creating and communicating legal documents.

Similar technology has already been used in a few other jurisdictions. The Federal Court of Australia issued a practice note on 31 March 2020 which opened the possibility of using streaming and other methods to ensure public access to hearings.⁷ However,

- 1 No utilizar, 'History of Holography' (NEWS BBVA25 November 2015) <<u>https://www.bbva.com/en/history-of-holography/> accessed 31 July 2022; 'Merriam-Webster Dictionary'</u> (Merriam-webster.com2022). <<u>https://www.merriam-webster.com/dictionary/hologram></u> accessed 15 June 2022; OpenMind' (OpenMind4 June 2015) <<u>https://www.bbvaopenmind.com/</u> en/science/leading-figures/dennis-gabor-father-of-holography/> accessed 24 August 2022.
- 2 (PDF) from White Elephant to Nobel Prize: Dennis Gabor's Wavefront Reconstruction' [2023] ResearchGate https://www.researchgate.net/publication/29815178_From_white_elephant_to_Nobel_Prize_Dennis_Gabor's_wavefront_reconstruction accessed 16 March 2023.

3 (3D Optical Systems Group' (Mit.edu2022) <<u>http://web.mit.edu/optics/www/holgraphy.</u> htm> accessed 30 July 2022.

4 'OpenMind' (*OpenMind* June 2015) <https://www.bbvaopenmind.com/en/science/ leading-figures/dennis-gabor-father-of-holography/> accessed 24 August 2022.

5 Ivan Tchalakov, The History of Holographic Optical Storage at Both Sides of the Iron 1969—1989, on JSTOR' (Jstor.org2023) <<u>https://www.jstor.org/stable/23787025</u>> accessed 23 March 2023.

6 Spaulding WC, 'Holographic Wills (Aka Handwritten Wills)' (Thismatter.com2022) <<u>https://thismatter.com/money/wills-estates-trusts/holographic-wills.htm</u>> accessed 29 July 2022.

7 McIntyre J, Olijnyk A and Pender K, 'Civil Courts and COVID-19: Challenges and Opportunities in Australia' (2020) 45 Alternative Law Journal 195 <<u>https://journals.sagepub.com/doi/full/10.1177/1037969X20956787</u>> accessed 24 August 2022.

some have argued that even if every court hearing was available to the public on Zoom, Teams or Skype, open justice would not be as complete as at a physical court hearing.⁸ The case of *Capic v Ford Motor Company of Australia Limited*⁹ has provided its view that those who can carry on this new practice should do their best to carry on, despite how inconvenient and tedious it may be. This view has been embraced by the Judicial Department of Abu Dhabi, which now offers remote court hearings using video conferencing software such as Meet Me and Webex.¹⁰ The Government of Dubai has also taken advantage of this technology, leading to an increase in their IT effectiveness in Dubai Courts.¹¹ Interestingly, in 2017, a court in China tested out a system that allowed lawyers to present evidence via holograms during a trial.¹² The results were promising and could lead to wider adoption of this technology across China's legal system.

In 2019, a law firm in Nashville, United States of America had its experienced personal injury attorneys selected as one of the first legal teams in the State to test out the cutting-edge 7D Hologram technology at the Nashville courthouse.¹³ The Hologram Lawyer Program ("HLP") uses live Holography to simulate the physical manifestation of an attorney appearing before a judge for day-to-day court proceedings.¹⁴ While its application in the courtroom has been met with some criticism, this unique combination of virtual and augmented reality offers major reductions in lag times between cases on the docket. It also provides significant savings in terms of security of staffing, as the number of people who visit the courthouse would be drastically reduced with the implementation of this technology.¹⁵

8 INFORRM, 'Covid-19, the UK's Coronavirus Bill and Emergency "Remote" Court Hearings: What Does It Mean for Open Justice? – Judith Townend' (*Inforrm's Blog24* March 2020). <<u>https://</u> inforrm.org/2020/03/24/covid-19-the-uks-coronavirus-bill-and-emergency-remote-courthearings-what-does-it-mean-for-open-justice-judith-townend/> accessed 24 August 2022.

9 Capic v Ford Motor Company of Australia Limited (Adjournment) [2020] FCA 486.

10 'Remote Court Hearings' (Adjd.gov.ae2019) <https://www.adjd.gov.ae/en/Pages/ RemoteCourtHearings.aspx> accessed 30 August 2022; Dubai Courts increases IT effectiveness by using assyst' (IFC.com2021) <https://www.axiossystems.com/hubfs/ assyst%20Case%20Studies%20IFS%20branded/IFS CS_Dubai%20Courts_01_2021. pdf?hsLang=en> accessed 30 August 2022; Jafza and Dubai Courts Launch the 1st Virtual Court in the Middle East to Handle Labour Litigations' (Zawya.com 26 September 2021). <https://www.zawya.com/en/press-release/jafza-and-dubai-courts-launch-the-1st-virtualcourt-in-the-middle-east-to-handle-labour-litigations-rdcnp1y9> accessed 30 August 2022.

11 'Session Details' (*Dc.gov.ae*2022) <https://www.dc.gov.ae/PublicServices/ SessionDetails.aspx?area_id=232&session_date=30-08-2022&hall_number=27&lit_ code=5> accessed 30 August 2022; Abu Dhabi Global Market Courts: Framework, Procedures and First Judgment Summary | Practical Law' (Westlaw.com2016) <https://content.next. westlaw.com/practical-law/document/Ieb4d63e22b5911e89bf099c0ee06c731/Abu-Dhabi-Global-Market-courts-framework-procedures-and-first-judgment-summary?viewType=FullT ext&transitionType=Default&contextData=(sc.Default)> accessed 30 August 2022.

12 'A Close Look at Hangzhou Internet Court: Inside China's Internet Courts Series -06 -China Justice Observer' (Chinajusticeobserver.com2019) https://www.chinajusticeobserver. com/a/a-close-look-at-hangzhou-internet-court> accessed 23 March 2023.

13 McElhaney R, 'Soap Box Law Blog for the Rocky McElhaney Law Firm' (*Rocky McElhaney Law* Firm11 June 2019) https://www.rockylawfirm.com/blog/page/19/> accessed 16 March 2023.

14 Rocky McElhaney Law Firm is going where no law firm has gone before by making hologram history. https://www.rockylawfirm.com/2019/03/31/rocky-law-firm-selected-to-beta-test-nashvilles-new-hologram-lawyer-program/ accessed 23 March 2023.

15 McElhaney R, 'Rocky Law Firm Selected to Beta Test Nashville's New Hologram Lawyer Program - Rocky McElhaney Law Firm' (*Rocky McElhaney Law Firm*31 March 2019) https://www.rockylawfirm.com/2019/03/31/rocky-law-firm-selected-to-beta-test-nashvilles-new-hologram-lawyer-program/ accessed 23 March 2023.



The process begins with two identical devices, each equipped with 235 nanotech, 360-degree video cameras, and 16 hi-density infrared lasers. These devices are placed on the floor in front of the subject at their law office. At the courthouse, a ¼-inch thick double-walled space-age polymer tube, standing 7 feet tall and 2 feet in circumference, is placed on a motorized base at the podium where a lawyer would typically stand. Once the lawyer at their respective location receives a confirmation of readiness from the courthouse's location, the transaction becomes similar to video conferencing, except the subject has the capability to step outside of the format and limitations of the flat television screen and bring the image to life.¹⁶

The use of holograms in the courtroom has the potential to revolutionise the way evidence is presented and how witnesses are questioned. Holograms offer a wide range of benefits, from providing a more immersive experience to allowing for more efficient communication. Holograms can be used to create 3D images that can be manipulated and interacted with in real time, allowing for a more engaging experience than traditional 2D images. It can also be used to communicate with people in different locations, allowing for more efficient collaboration. Additionally, holograms can be used to create virtual reality experiences, allowing users to explore and interact virtually.

2. BENEFITS OF HOLOGRAMS

More specifically holograms provide the following:

Enhanced Visualisation: Holograms provide a vivid, three-dimensional image that can be manipulated and viewed from any angle. This makes them particularly useful in educational and medical settings, where it can be difficult to explain a concept or visualise a medical procedure especially in cases involving elaborate and technical explanations of procedures that are required to be heard in court proceedings.¹⁷

Increased Interactivity and Improved Accessibility: Holograms can be used to create interactive experiences, allowing users to interact with the hologram as if it were a real-life object. Holograms can be used to make complex concepts and ideas more accessible to a wider range of people especially in remote and interior parts of the country. This can

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Source: "Hologram Lawyer Program" <https:// www.rockylawfirm. com/2019/03/31/ rocky-law-firm-selectedto-beta-test-nashvillesnew-hologram-lawyerprogram/>.

¹⁶ Ibid.

¹⁷ Ibid.

be particularly useful in settings, where more complex concepts can be presented in an engaging and interactive way.¹⁸

Increased Versatility: Holograms can be used in a variety of different settings and for a variety of different purposes. They can be used for educational purposes, for product demonstrations, for advertising, for entertainment, medical science, and many more.¹⁹

Improved Safety: Holograms are designed to be safe to interact with and handle, making them ideal for use in places such as hospitals and research laboratories.²⁰ Presenting evidence is made simpler and more precise with the use of holographic technology. This technology allows medical professionals and other experts to present their findings from their laboratories in a more efficient manner. The technology also helps to improve the process of justice by providing more accurate and reliable evidence resulting in a more reliable and accurate justice system.

2.1 KEY TECHNOLOGICAL ADVANCEMENTS IN THE MALAYSIAN JUDICIARY

The Malaysian Judicial system have often received comments for its slowness which caused the backlog of cases.²¹ The court's commitment to clearing the backlog and expediting the resolution of cases began when Tun Dato' Seri Zaki Tun Azmi was appointed Chief Justice in 2008.²² It was in 2009 that reforms to the entire judicial system were introduced and implemented in order to hasten the resolution of cases. The reforms were aimed at improving the administration of justice. To augment the efficiency of the Judiciary at all levels, the Malaysian Judiciary introduced the "e-Court System" in 2009.²³ The e-Court system is composed of two phases. Phase I of the e-Court system includes e-filing, the Case Management System ("CMS"), the Queue Management System ("QMS"), and the Court Recording and Transcription System ("CRT"). Phase II of the project has additional modules that are not present in Phase I.²⁴

18 Ibid.

19 Ibid.

20 Ibid.

21 "Malaysia Court Backlog and Delay Reduction Program: A Progress Report," (*World Bank*2019), <<u>https://documents.worldbank.org/en/publication/documents-reports/</u> documentredirects?url=/curated/en> accessed 6 March 2023.

22 '(PDF) Judicial Reforms through the Use of Technology in Malaysia' (*ResearchGate*2017) <<u>https://www.researchgate.net/publication/316124316_Judicial_</u> Reforms_through_the_Use_of_Technology_in_Malaysia#fullTextFileContent> accessed 16 March 2023.

23 '(PDF) Judicial Reforms through the Use of Technology in Malaysia' (*ResearchGate*2017) <<u>https://www.researchgate.net/publication/316124316_Judicial_</u> Reforms_through_the_Use_of_Technology_in_Malaysia#fullTextFileContent> accessed 16 March 2023.

24 Those modules include online filing for criminal matters and Power of Attorney, appeal module for the Court of Appeal and Federal Court, e-lelong, integration with Bar Council for Practising Certificate Module, and integration with the Royal Malaysian Police, Road Transport Department, Immigration Department, National Registration Department, Insolvency Department and Prison Department (Qishin Tariq, 2016) (PDF) Judicial Reforms through the Use of Technology in Malaysia' (*ResearchGate2017*) <<u>https://</u> www.researchgate.net/publication/316124316_Judicial_Reforms_through_the_Use_of_ Technology_in_Malaysia#fullTextFileContent> accessed 16 March 2023.

The e-Court system has revolutionised the adjudication system, allowing the public to reap considerable benefits while modernising and internationalising the Malaysian Judiciary.²⁵

The Malaysian Judiciary has gone through a journey of technological advancement since 2013 with the introduction of the E-Shariah Courts mostly at the Federal Government level.²⁶ The Shariah Court is utilising Information and Communications Technology to enhance its court operations. This includes the use of video conferencing with high-tech video presenters and monitors, recreation of crime scenes, an electronic filing system, electronic case management, electronic court records management, systematic information storage and retrieval systems, and more.

The Malaysian Judiciary has also implemented a number of other innovative measures to enhance judicial administration. They introduced the e-Court Finance system ("E-CFS") in 2014.²⁷ As of 9th December 2015, the Malaysian Judiciary has implemented *e-Jurubahasa* (interpreter) to facilitate and accelerate the process of requesting foreign language interpreters in criminal matters.²⁸

A recent notable development related to the use of Artificial Intelligence ("AI") in Sabah and Sarawak courts in *Denis P. Modili* v. *Public Prosecutor*.²⁹ Making history in Malaysian law, this case was the first to apply AI in sentencing. Nevertheless, initiatives and efforts must continue to be implemented periodically to enhance the efficiency of the Judiciary at all levels and to improve the delivery system.

3. EXPLORING THE USE OF HOLOGRAMS WITHIN THE EXISTING LEGISLATIVE FRAMEWORK IN MALAYSIA

To address the Covid-19 pandemic, its implications and to surmount the difficulties imposed by the pandemic, various Movement Control Orders in Malaysia adjustments have been made to the way hearings and trials are conducted. These alterations consist of conducting hearings and trials remotely and virtually. Amendments

25 '(PDF) Judicial Reforms through the Use of Technology in Malaysia' (*ResearchGate*2017) < https://www.researchgate.net/publication/316124316_Judicial_Reforms_through_the_Use_ of_Technology_in_Malaysia#fullTextFileContent> accessed 16 March 2023.

26 '(PDF) E-Shariah: Information and Communication Technologies for Shariah Court Management' [2013] ResearchGate <<u>https://www.researchgate.net/</u> publication/259433871_E-Shariah_Information_and_Communication_Technologies_for_ Shariah_Court_Management> accessed 31 July 2022.

27 '(PDF) Judicial Reforms through the Use of Technology in Malaysia' (*ResearchGate2017*) <<u>https://www.researchgate.net/publication/316124316_Judicial_</u> Reforms_through_the_Use_of_Technology_in_Malaysia#fullTextFileContent> accessed 16 March 2023.

28 '(PDF) Judicial Reforms through the Use of Technology in Malaysia' (ResearchGate2017) <https://www.researchgate.net/publication/316124316_Judicial_ Reforms_through_the_Use_of_Technology_in_Malaysia#fullTextFileContent> accessed 16 March 2023.

²⁹ Sanghvi H and others, 'Digitalisation of Judiciary in Malaysia: Application of Artificial Intelligence in the Sentencing Process' [2022] Proceedings of the International Conference on Law and Digitalization (ICLD 2022) 91 <<u>https://www.atlantis-press.com/proceedings/</u> icld-22/125979428> accessed 16 March 2023.

have been made to three relevant Acts – the Courts of Judicature Act 1964,³⁰ the Subordinate Courts Act 1948,³¹ and the Subordinate Courts Rules Act 1955³² to provide more security and clarity regarding online hearings. These amendments add new sections and modify existing provisions to ensure the wellbeing and guidance of Malaysian lawyers and judges.

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The question addressed in this discussion is whether holograms could be introduced within the existing parameters provided by the relevant legislative provisions in Malaysia.

(a) Interpretation of "Remote Communication Technology"

The interpretation of "remote communication technology" has been added to the three Acts respectively, in Section 2 of the Subordinate Courts (Amendment) Act 2020;³³ section 2 of the Subordinate Courts Rules (Amendment) Act 2020³⁴ and Section 3 of Courts of Judicature Act 1964.³⁵ In all these provisions, "remote communication technology' is defined as a 'live video link, a live television link or any other electronic means of communication."

The general understanding of a "live video link" is that of a URL that allows one to watch a live video stream.³⁶ It can be used to watch a live event, a live broadcast, or a live video chat. A "live television link"³⁷ is a connection between two television networks that allows them to broadcast live content from one network to the other. This type of link is often used for news broadcasts, sports events, and other live programming. Furthermore, "any other electronic means of communication includes" telephone, email, text messaging, video conferencing, and social media.³⁸ Given the understanding of how holograms function and upon applying the purposive approach

30 '(MY) 15A.Court May Conduct Proceedings through Remote Communication Technology' (Lexis.com2023) <https://advance.lexis.com/document/?pdmfid=1522468&crid=b5cd1d df-feba-429d-9706-1d945a691a5d&pddocfullpath=%2Fshared%2Fdocument%2Flegislationmy%2Furn%3AcontentItem%3A622D-1RW1-JTNR-M4BD-00000-00&pdcontentcomponentid= 500399&pddoctitle=15A.Court+may+conduct+proceedings+through+remote+communication+ technology&pdteaserkey=sr1&pdicsfeatureid=521734&pditab=allpads&ecomp=zxsrk&earg=sr 1&prid=aa33f24e-20cf-424a-a93b-01b509b1af6> accessed 2 March 2023.

31 'ASM - Subordinate Courts Act 1948 (Act 92) (Revised 1972)' (*Lexis.com*2023) <https:// advance.lexis.com/toc/?pdmfid=1522468&crid=fd6d4356-0cdd-4283-937b-e0383884f34 e&pdtocfullpath=%2Fshared%2Ftableofcontents%2Furn%3AcontentItem%3A5RFD-V371-FG8G-3000-00000-00&ecomp=zzg4k&prid=ce7fa1f3-1963-4761-aa23-baa9e8fc8db4> accessed 16 March 2023.

32 'Act:MY_FS_ACT_1971_55' (*Openathens.net2020*) <https://www-cljlaw-com.eu1.proxy. openathens.net/Members/DisplayAct.aspx?ActSectionId=4026695690&SearchId=4mmu1> accessed 16 March 2023.

34 Subordinate Courts Rules (Amendment) Act 2020 [Act A1623] After receiving the Royal Assent on 10 October 2020, the Subordinate Courts Rules (Amendment) Act 2020 ("Amended Act") was gazetted on 22 October 2020.

37 Subordinate Courts (Amendment) Act 2020, s.2.

38 [2022] MLJU 1736.

³³ Subordinate Courts (Amendment) Act 2020 [Act A1622]:

The amendments made to the Subordinate Courts Act 1948 ("SCA 1948") are to enable the lower courts to conduct the proceedings of any cause or matter, be it civil or criminal, or to hold any inquiry through live video links, live television links or any other medium of electronic communication. After receiving the Royal Assent on 10 October 2020, the Subordinate Courts (Amendment) Act 2020 ("Amended Act") was gazetted on 22 October 2020.

^{35 [&}quot;remote communication technology" Ins. Act A1621:s.2] section 3. Interpretation.

³⁶ Courts of Judicature (Amendment) Act 2020, s.3.

which seeks to give effect to the true purpose of the legislation, it can be concluded that "any other electronic means of communication" includes holographs as well. The challenge, however, lies not in the interpretation of remote communication technology and its coverage of holograms but in the application of Section 15A of the Courts of Judicature Act 1964. This will be examined in the following section.

3.1 AMENDMENTS TO COURTS OF JUDICATURE ACT 1964 ("CJA")

One new section has been added into the previous Section 15 of the CJA, namely Section 15A. Section 15A [1] states that the Court may, without limiting to section 15, conduct the hearings or trials of any cause or matter, be it civil or criminal, through a remote communication technology in order to ensure that access to justice is available to the public.

For example, Section 15 provides for the courts to be open and public:

"(1) The place in which any Court is held for the purpose of trying any cause or matter, civil or criminal, shall be deemed an open and public court to which the public generally may have access:

Provided that the Court shall have power to hear any cause or matter or any part thereof in camera if the Court is satisfied that it is expedient in the interests of justice, public safety, public security or propriety, or for other sufficient reason so to do.

(2) A Court may at any time order that no person shall publish the name, address or photograph of any witness in any cause or matter or any part thereof tried or held or to be tried or held before it, or any evidence or any other thing likely to lead to the identification of any such witness; and any person who acts in contravention of any such order shall be guilty of an offence and shall, on conviction, be liable to a fine not exceeding five thousand ringgit or to imprisonment for a term not exceeding three years or to both."

The added section includes:

Section 15A: Court may conduct proceedings through remote communication technology³⁹

"(1) Without limiting section 15, the Court may, in the interest of justice, conduct the proceedings of any cause or matter, civil or criminal, through a remote communication technology.

(2) In the case of the High Court, the place in which the High Court is held to conduct the proceedings of any cause or matter, civil or criminal, through a remote communication technology shall be deemed to be conducted within the local jurisdiction of such High Court.

(3) Nothing in this section shall affect the operation of section 5 of the Evidence of Child Witness Act 2007 [Act 676], sections 265A and 272B of the Criminal Procedure Code [Act 593] and section 32A of the Evidence Act 1950 [Act 56].

(4) In this section, "place" includes cyberspace, virtual place or virtual space."

(a) Challenges and Issues

(i) Interest of Justice

Section 15A (1) of the CJA '64 states "...the Court may, in the interest of justice, conduct the proceedings of any cause or matter, civil or criminal, through a remote communication technology." The issue is that it is unclear whether the court has a legal right or is obligated to make a decision in the interest of justice before utilising remote technology. If it is left to the individual judge to determine what constitutes the "interest of justice" in a particular case, this could lead to subjective decisions with varying interpretations resulting in potential inconsistencies in the application of the law.

Thus, it is respectfully put forward that the word "interest of justice" should be removed as the aim of this amendment is to enable the Courts to conduct civil or criminal proceedings through remote communication technology. The phrase "in the interest of justice" is superfluous and does not conform to the purpose of the drafting of the section.

(ii) Matters relating to Child Witnesses

The above amendments, however, do not affect evidence by child witnesses by means of a live link under the Evidence of Child Witness Act 2007 and evidence by a protected witness under the Criminal Procedure Code and the Evidence Act 1950. Which means section 5(1) of the Evidence of Child Witness Act 2007 provides for evidence by live link where a child witness gives evidence by means of a live link from a location other than the courtroom, that location is deemed to be part of the courtroom in which the proceeding is being held for the purposes of this section. Section 5(2) provides that the Court may make an order specifying-

"(a) that a member of the Court staff be present at that location;

(b) the interpreter for the proceedings;

(c) any adult permitted by the Court to accompany the child witness;

(d) the persons in the courtroom who must not be heard, or seen and heard, by the child witness and by the persons accompanying the child witness;

(e) the persons in the courtroom who must be able to see and hear the child witness and the persons accompanying the child witness;

(f) the method of operation of the live link system including compliance with such minimum technical standards as may be determined by the Chief Justice of the Federal Court; and

(g) any other matter as the Court considers necessary in the interest of justice."

Section 2 of the same Act explains that a "live link" means a live television link or other arrangement whereby a child witness, while being absent from the courtroom or other place where the proceedings are being held, is able to see and hear a person in such courtroom or other place and to be seen and heard by the persons specified in paragraphs 4(2)(a) to (d).

Given the use of holography, it is questionable whether the provisions listed in Section 5(2)(a)-(g) of the Courts of Judicature Act 1964 are necessary, as the issues of location, interpreter, identity, and other surrounding requirements are no longer necessary factors.

(iii) Manner of Recording Evidence

Inquiries and trials under the Criminal Procedure Code before a Magistrate pursuant to Section 265 shall require the witnesses' evidence to be recorded according to the provisions of this Chapter. Section 272B.(1) permits an individual, other than the accused, to present video or live testimony through a live video or live television link during any trial or inquiry, with the Court's permission, regardless of other provisions in this Code or the Evidence Act 1950, provided it serves the interests of justice. By virtue of 272B. (2) the Court may make an order on any or all of the matters listed in subsection (2) when exercising its power under subsection (1).

These matters include the persons who may be present at the place where the witness is giving evidence, that a person be excluded from the place while the witness is giving evidence, the persons in the courtroom who must be able to be heard or seen by the witness and by the persons with the witness, the persons in the courtroom who must not be able to be heard or seen and heard by the witness and by the persons with the witness, the persons in the courtroom who must be able to see and hear the witness, the persons in the courtroom who must be able to see and hear the witness and the persons with the witness, the stages in the proceedings during which a specified part of the order is to have an effect, the method of operation of the live video or live television link system including compliance with such minimum technical standards as may be determined by the Chief Justice, and any other order in accordance with this section shall be deemed to be giving evidence in the presence of the Court, the accused person or his advocate, as the case may be. Additionally, any video or live evidence given under this section that is recorded on any medium, electronic, or otherwise, shall form part of the record.⁴⁰

Section 16 of the CJA is also amended with the addition of the new paragraph under "(aa) for regulating and prescribing the procedure and the practice to be followed in the High Court, the Court of Appeal and the Federal Court in all causes and matters whatsoever in or with respect to the hearing of any matter or proceeding through a remote communication technology;"

Section 69(1) of the CJA Act has been amended to include the phrase "or through remote communication technology" after the words "in court."

"(1) Appeals to the Court of Appeal shall be by way of re-hearing, and in relation to such appeals the Court of Appeal shall have all the powers and duties, as to amendment or otherwise, of the High Court, together with full discretionary power to receive further evidence by oral examination in court or through a remote communication technology, by affidavit, or by deposition taken before an examiner or commissioner.

Section 17 B states "the Chief Justice may issue such practice directions as may be necessary for the purpose of carrying into effect the provisions of this Act after consulting the President of the Court of Appeal or the Chief Judge."

Thus, in analysing this, it is clear that this section does encompass technology in the courtroom. The Chief Justice of Malaysia herself stated: "I wish to make it clear that the Judiciary has always embarked on technological advancements, and online or virtual hearings mark our progress in this direction. The advent of online hearings is not merely a means to cope with the pandemic but a permanent feature of our justice

system. There is, therefore, no question of 'reverting.'"⁴¹ By examining the operation of the above sections, it can be inferred that the use of holography in a court proceeding would not have any negative impact on the way evidence is recorded.

(iv) Interpretation of a "place" in section 15A CJA '64

Section 15A (2) of CJA also states that for High Court cases, the place in which the High Court is held to conduct the proceedings through a remote communication technology shall be deemed as to be conducting within the local jurisdiction of such High Court.

Section 15A (4) provides that the word "place" includes cyberspace, virtual place, or virtual space. The interpretation of "place" raises an interesting question as to the reason behind the inclusion of three different terms to refer to one "place" in light of conducting proceedings via remote communication technology.

The term "cyberspace" was coined by William Gibson, author of Neuromancer, and is often used when discussing digital technologies and new media.⁴² It is a broad term that can mean different things to different people, but generally refers to the sphere of activity created by communications technologies, particularly on the Internet. The term "Cyberspace" started to become a *de facto* synonym for the Internet, and later the World Wide Web, during the 1990s, especially in academic circles and activist communities.⁴³ Although the term "cyberspace" is no longer as popular, the concept of virtual space is still relevant and worth exploring.

It appears that the distinction between "place" and "space" is becoming blurred, as virtual space is discussed more often than virtual place. A "place" is more than just a bounded area of space; it is a space that has been imbued with meaning. What makes a place a place is its specificity, not only in geography but also in networks of meaning and imagination.⁴⁴ Our homes, schools and offices are places only insofar as they carry with them certain distinctive characters and interactions. Without these associated meanings, a location is simply a portion of space, lacking in any names or meaningful structures. They simply become sections of space.

Transferring this distinction to the realm of the virtual, it is easy to understand what we mean by virtual space, and even by virtual location. Virtual places are areas within the virtual world that are defined by the user. They can be created through the use of URLs, website infrastructures, and other virtual tools. These places can be used to store information, communicate with others, or simply provide a space for users to explore. Virtual place can be thought of in terms of video games and virtual worlds, such as Roblox, Minecraft or Fortnite. These virtual environments attempt to replicate the features of real-world places, like landscapes, buildings, and neighbourhoods. However, if we limit our understanding of virtual place to these digitally rendered

41 Speech By the Right Honourable the Chief Justice of Malaysia, Tun Tengku Maimun Binti Yuan Mat on the Occasion of the 'Opening of the Legal Year 2022' Access to Justice and the New Normal, Friday, 14 January 2022 Palace of Justice, at Putrajaya and Via Zoom.

42 Gibson W, 'Neuromancer (Sprawl, #1)' (*Goodreads*2022) <<u>https://www.goodreads</u>. com/book/show/6088007-neuromancer> accessed 16 March 2023.

43 (PDF) Collective Memory and Cyberspace' (*ResearchGate*2017) <https://www.researchgate. net/publication/319123609_Collective_memory_and_cyberspace> accessed 16 March 2023.

44 'Ethics in Cyberspace' (Google Books2023) <https://books.google. com.my/books?id=o2lJgtU2kyYC&pg=PA70&dq=meaning+of+cyberspace &hl=en&sa=X&ved=2ahUKEwiWkrG8q8X9AhXl1zgGHUu9CuUQ6AF 6BAgHEAI#v=onepage&q=virtual%20place&f=false> accessed 5 March 2023.

environments, we fail to capture the full scope of online experiences. By exploring the distinction between virtual space and virtual place, we can gain a more nuanced understanding of online communities and interactions. Thus, a virtual place can be represented to ourselves and others as either a physical location or an infinite part of cyberspace. Therefore, if "cyberspace" is the digital world of online communication and information and "virtual space" is a simulated environment created by computer software, which can be used to explore, interact with, and create content then "virtual place" would be virtual environment indicating a particular place.

As explained above, holograms and virtual places are both forms of virtual reality. Holograms are three-dimensional images created with the help of lasers, while virtual places are computer-generated environments that can be explored and interacted with. Holograms can be used to create immersive experiences, while virtual places can be used to create virtual worlds and simulations. Therefore, it appears by virtue of section 15A(4) the current law on remote communication technology allows for the use of holograms in court proceedings.

(v) Concept of Open Justice

Section 15 of CJA provides that "a place in which any court is held for the purpose of trying any clause or matter, civil or criminal shall be deemed an open court and public to which the public generally has access."

Several cases which include Dato' Seri Mohd. Najib bin Abdul Razak v. Public Prosecutor,⁴⁵ *PP v. Shaharil Said*⁴⁶ and *Kanopy Investment Private Limited v. Landmark Holdings Berhad*⁴⁷ have decided on the extent of the application of subsection 15(1) which focuses on the public nature of a court proceeding i.e., the court must be open to the public generally, the public must have access and the trial is required to be held openly and transparently so that justice is not only done but appears to be done. The cases that were decided clearly focused on the public nature of a court proceeding only. In the event that a court proceeding is conducted online, for example through a video conference with the presence of the relevant parties only the video conference does not "block" the case from public access. This is because the public can still access the video conference through live streaming or any method that will be determined by the court.

Therefore, introducing holography would not contravene the concept of open justice as it is also similar to online hearings made through live streaming or broadcast as the parties are not prevented from arguing their case or responding to the opposing party's arguments. Proceedings that are conducted online only involve a change of venue or place, i.e., from a physical court to a virtual or virtual one. Unless the parties indicate that there will be prejudice to their case, no objection may be made on technical or procedural grounds merely because the hearing of the case is conducted online.

Also, in a proceeding conducted using long-distance communication technology or holograms all the rights and obligations of the parties are unchanged. Matters related to the application of substantive legal provisions, the burden of proof, the right of the parties to be heard and response to a case against them remain and remain unchanged as the hearing of the proceedings conducted in the courtroom.

^{45 [2019] 4} MLJ 281 Federal Court.

^{46 [2007] 4} CLJ High Court.

^{47 [1989] 2} MLJ 469.

3.2 AMENDMENT TO SUBORDINATE COURTS ACT 1948 AND THE SUBORDINATE COURTS RULES ACT 1955

A new section has been added as well to the Subordinate Courts Act 1948, which is section 101B where it states that the Court may, without limiting to Section 101 of this Act, conduct the hearings and trials or hold any inquiry via a remote communication technology, in the interest of justice.

Section 101B(1) of Subordinate Courts Act 1948: "Without limiting section 101, the court may, in the interest of justice, conduct the proceedings of any cause or matter, civil or criminal, or hold any inquiry, through a remote communication technology."

(2) the place in which the court conduct the proceedings of any cause or matter, civil or criminal, or hold any inquiry, through a remote communication technology shall be deemed to be conducted within the local limits of jurisdiction assigned to it under section 59 or 76 or, if no such local limits have been assigned, arising in any part of Peninsula Malaysia.

Apart from the added definition of remote communication technology, section 4 introduces a new paragraph (aa) in the Subordinate Courts Rules Act 1955.

Paragraph (aa) of section 4 of Subordinate Courts Rules Act 1955 states, "For regulating and prescribing the procedure and the practice to be followed in Subordinate Courts in all causes and matters whatsoever in or with respect to the hearing of any matter or proceeding through a remote communication technology."

The observations highlighted on the issue of "interest of justice" and that of the "place" is reiterated in relation to the above sections as well.

Since the Subordinate Courts Act 1948 does not apply to Sabah and Sarawak, ⁴⁸ the legislation could be amended to extend its reach to the whole of Malaysia. The question remains whether the inclusion of conducting a trial by remote communication technology would actually achieve its purposes with such limitations of jurisdiction, especially since the word "place" includes the cyberspace, virtual place, and virtual space, which do not have any physical jurisdictions or boundaries.

4. CONCLUSION

In conclusion, the amendments to the three Acts have been made to ensure that access to justice remains available to the public, during the pandemic and beyond, by allowing for the delivery of justice through remote communication technology. As explained above, there does not seem to be any impediment to the introduction of holography in court proceedings in Malaysia, as the current amendments allow for such usage.

The recent rise of holographic technology offers a potential solution for victims of sexual abuse, vulnerable witnesses who may find testifying to be a traumatic experience. Holography can eliminate the need for them to return and face the attacker in person. This could help to reduce the trauma and distress normally experienced by a witness.

Holograms with their highest resolutions have been designed to provide a realistic experience for victims and have been described as "indistinguishable from reality."⁴⁹ Use of holograms serveas a form of protection for witnesses, as well as allowing judges to assess the demeanour and credibility of the witnesses. For instance, holographic technology, such as SolidLight holograms, the judge can experience the witness in a realistic, three-dimensional setting, allowing for a more accurate assessment of the witness's credibility.

The recent amendments to the relevant statutory provisions examined above have enabled courts in Malaysia to exercise their discretion in dispensing justice in the most realistic form possible, *albeit* the issue of "interest of justice" and the remaining challenges highlighted. The use of holography in court proceedings in Malaysia has the potential to provide numerous benefits to the current system. Holography can provide a more realistic and accurate representation of evidence, allowing for a more accurate and reliable justice system while using remote communication technology. It can also reduce the need for physical court proceedings, allowing for more efficient and cost-effective justice delivery. It must be noted that though holograms are captured within the interpretation of remote communication technology, protocols for the use of Holograms must be put in place like that of Protocols for the use of video conferencing (VCF) in civil proceedings in the Dubai International Financial Centre Courts which is also similar to protocol of the Federal Court of Australia.

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COMPETING INTERESTS

The author has no competing interests to declare.

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 ^{49 &#}x27;Colombian Court Holds Hearing in the Metaverse' (*Cryptonews.net*17 February 2023)
https://cryptonews.net/news/metaverse/20573125/> accessed 19 February 2023.

REFERENCES

TABLE OF STATUTE

Communications and Multimedia Act 1998 (Act 588) Computer Crimes Act 1997 (Act 563) Constitution of United Arab Emirates Copyright Act 1987 (Act 332) Copyright, Designs and Patents Act 1988 (CDPA) (c 48) Courts of Judicature Act 1964 (Act 91) Patents Act 1983 (Act 291) Subordinate Courts Act 1984 (Act 92)

CASE LAW

United States of America

Astaire v. Best Film & Video Corp., 116 F.3d 1297, 1301 (9th Cir. 1997) (quoting Younger v. Superior Court, 21 Cal. 3d 102, 145 (1978), amended by 136 F.3d 1208 (9th Cir. 1998).

Malaysia

ABC v JKL [2020] 11 MLJ 421; Ahmad Abd Jalil lwn Pendakwa Raya [2014] MLJU 1938 Ang Gee Guan v Janice Ng Kerh Chin [2022] MLJU 2574 Basheer Ahmad Maula Sahul Hameed dan Lain Lain v Pendakwa Raya [2016] 09 MLJ 549 British Leyland Motor Corporation Ltd. v. Armstrong Patents Co. Ltd [1986] 1 AC 577 Capic v Ford Motor Company of Australia Limited (Adjournment) [2020] FCA 486 Creative Purpose Sdn Bhd & Anor v Integrated Trans Corp Sdn Bhd & Ors [1997] 2 MLJ 429 Dato' Gee Siew Yee v PP [2020] MLJU 1342 Dato' Sri Mohd Najib bin Hj Abd Razak v PP PP [2019] 8 MLJ 624 Dato' Sri Mohd Najib bin Hj Abdul Razak v PP [2019] 5 MLJ 623,CA; Datuk Seri Anwar Ibrahim v Kerajaan Malaysia & Anor [2021] MLJU 1431 Deputy Public Prosecutor v Amar Asyraf Bin Zollepli [2020] 12 MLJ 287 Goodyear Tire and Rubber Co. v. Silverstone Tire and Rubber Co. Sdn. Bhd [1994]1 MLJ 348 H & Anor v W(F)(2) [2022] MLJU 79 Ing Bank NV v Anish Resources Sdn Bhd [2022] MLJU 591 Jufazli bin Shi Ahmad v Pendakwa Raya [2022] 8 MLJ 684 Kangaie Agilan a/l Jammany v Public Prosecutor [2017] MLJU 1647 Lee Boon Tuan v PP [1960] MLJ 179 Ling Kai Huat & Anor v Public Prosecutor [1966] 1 MLJ 123 Mohd Fahmi Reza bin Mohd Zarin lwn Pendakwa Raya [2020] 7 MLJ 399 Nik Adib bin Nik Mat v Public Prosecutor [2017] MLJU 1831 Nor Hisham bin Osman v Public Prosecutor [2010] MLJU 1249 Obnet Sdn Bhd v Suruhanjaya Komunikasi dan Multimedia Malaysia [2017] MLJU 1226 Peko Wallsend Operations Ltd. v. Linatex Process Rubber Bhd [1993] 1 MLJ 225 Prosecutor v Gan Kiat Bend [2011] 1 MLJU 1513 Protect Print Sdn Bhd v William Tan Hong Sam [2006] ILJU 256 Public Prosecutor v Goo Kian [1939] 1 MLJ 291b Per Raja Musa Ag J Public Prosecutor v Muhammad Hakim Habibullah [2022] MLJU 1237 Public Prosecutor v Muslim Ahmad [2012] MLJU 1807 Public Prosecutor v Rutinin Suhaimin [2012] MLJU 1808 Public Prosecutor v Zulkifli bin Ariffin [2022] MLJU 2623 Rexallent Construction Sdn Bhd v MSIG Insurance (Malaysia) Bhd and other cases [2022] MLJU 1736

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Rose Hanida bt Long v Public Prosecutor [2017] MLJU 1212 Rutinin Suhaimin v Public Prosecutor [2014] 5 MLJ 282 Seet Soon Guan v Public Prosecutor [1955] 1 MLJ 223 Tengku Adnan bin Tengku Mansor v PP [2022] 1 MLJ 93 (CA). Teoh Kah Yong v Public Prosecutor [2022] MLJU 3184 Toh See Wei v Teddric Jon Mohr & Anor [2017] 11 MLJ 67

JOURNAL ARTICLE

- '(MY) 15. Courts to Be Open and Public' (Lexis.com2023) <https://advance.lexis.com/ document/?pdmfid=1522468&crid=7b2ff25a-dac5-4839-a6f0-38132956b934 &pddocfullpath=%2Fshared%2Fdocument%2Flegislationmy%2Furn%3AcontentItem%3A5RC3-NHW1-JW5H-X2FJ-00000-00 &pdtocnodeidentifier=ADTAABAAP&ecomp=wc2fk&prid=c51dfd91-376a-4b69a95f-12a20dc1512b&federationidp=QSTTX459741&cbc=0> accessed 2 March 2023
- '(MY) 15A.Court May Conduct Proceedings through Remote Communication Technology' (*Lexis.com*2023) <https://advance.lexis.com/ document/?pdmfid=1522468&crid=b5cd1ddf-feba-429d-9706-1d945a691a5d&pddocfullpath=%2Fshared%2Fdocument %2Flegislation-my%2Furn%3AcontentItem%3A622D-1RW1-JTNR-M4BD-00000-00&pdcontentcomponentid=500399&pddoctitle=15A. Court+may+conduct+proceedings+through+remote+communication+ technology&pdteaserkey=sr1&pdicsfeatureid=1521734&pditab= allpods&ecomp=zxsrk&earg=sr1&prid=aa33f24e-20cf-424a-a93b-901b509b1af6> accessed 2 March 2023
- '(MY) COMPUTER CRIMES ACT 1997 Act 563 3. Unauthorized Access to Computer Material' (*Lexis.com*2023) <https://advance.lexis.com/document/ documentlink/?pdmfid=1522468&crid=d52ab253-0655-4dd7-9e76aab7e787749d&pddocfullpath=%2Fshared%2Fdocument%2Flegislation-my %2Furn%3AcontentItem%3A5RC3-NS41-JSRM-6389-00000-00 &pdcontentcomponentid=500399&pddoctitle=Unauthorized+access+to+ computer+material&pdproductcontenttypeid= urn%3Apct%3A350&pdiskwicview=false&ecomp=z5x3k&prid=268cedd9-320a-475a-b8eb-9c95fc26f76b> accessed 3 March 2023
- '(MY) COMPUTER CRIMES ACT 1997 Act 563 4. Unauthorized Access with Intent to Commit or Facilitate Commission of Further Offence' (*Lexis. com*2023) <https://advance.lexis.com/document/documentlink/?pdmfid= 1522468&crid=ea38be9b-6e06-4a82-8507-11eb74a7906a&pddocfullpath= %2Fshared%2Fdocument%2Flegislation-my%2Furn%3AcontentItem%3A5RC3-NS41-JSRM-6387-00000-00&pdcontentcomponentid=500399& pddoctitle=Unauthorized+access+with+intent+to+commit+or+ facilitate+commission+of+further+offence&pdproductcontenttypeid= urn%3Apct%3A350&pdiskwicview=false&ecomp=z5x3k&prid=268cedd9-320a-475a-b8eb-9c95fc26f76b> accessed 3 March 2023
- '(MY) COMPUTER CRIMES ACT 1997 Act 563 5. Unauthorized Modification of the Contents of Any Computer' (*Lexis.com*2023) <https://advance.lexis.com/ document/documentlink/?pdmfid=1522468&crid=d90703b5-ac20-4b03a823-7a28069c039b&pddocfullpath=%2Fshared%2Fdocument%2Flegislationmy%2Furn%3AcontentItem%3A5RC3-NS41-JSRM-638M-00000-00& pdcontentcomponentid=500399&pddoctitle=Unauthorized+modification+of+the+ contents+of+any+computer&pdproductcontenttypeid=urn%3Apct%3A350& pdiskwicview=false&ecomp=z5x3k&prid=268cedd9-320a-475a-b8eb-9c95fc26 f76b> accessed 3 March 2023

- '(MY) COMPUTER CRIMES ACT 1997 Act 563 6. Wrongful Communication' (Lexis.com2023) < https://advance.lexis.com/document/ documentlink/?pdmfid=1522468&crid=baa80aaf-2365-43d5-8ab2-729c5dc88287&pddocfullpath=%2Fshared%2Fdocument%2Flegisla tion-my%2Furn%3AcontentItem%3A5RC3-NS41-JSRM-638K-00000-00&pdcontentcomponentid=500399&pddoctitle=Wrongful+communication& pdproductcontenttypeid=urn%3Apct%3A350 &pdiskwicview=false&ecomp=z5x3k&prid=db542f66-b4fe-4c80-a81a-49ceb34a3ac6> accessed 3 March 2023
- '(PDF) Analysis and Implementation of Hologram Lenses for See-through Head-Mounted Display' [2016] ResearchGate https://www.researchgate.net/ publication/310438783_Analysis_and_Implementation_of_Hologram_Lenses_ for_See-through_Head-Mounted_Display> accessed 30 July 2022
- "Hologram" Performance by Tupac Creates Legal Questions for IP Lawyers - the Indiana Lawyer' (*The Indiana Lawyer8* May 2012) <<u>https://www.theindianalawyer.com/articles/28758-hologram-performance-by-tupac-creates-legal-questions-for-ip-lawyers</u>> accessed 13 November 2022
- '3D Optical Systems Group' (*Mit.edu*2022) <<u>http://web.mit.edu/optics/www/</u> holgraphy.htm> accessed 30 July 2022
- 'ARTICLE: HOLOGRAM IMAGES and the ENTERTAINMENT INDUSTRY: NEW LEGAL TERRITORY?, 10 Wash. J.L. Tech. & Arts 109' (*Lexis.com*2014) <https:// advance.lexis.com/document/?pdmfid=1522468&crid=7591907d-9152-4af5-bb01-6f95d7c58f1c&pddocfullpath=%2Fshared%2Fdocument%2 Fanalytical-materials%2Furn%3AcontentItem%3A5DXT-01S0-02C9-K0K2-00000-00&pdcontentcomponentid=301442&pdteaserkey=sr4&pdicsfeatureid= 1517130&pditab=allpods&ecomp=zdJrk&earg=sr4&prid=634bb8f3-3cd3-4d93-8bc4-1ab781853648> accessed 12 November 2022
- 'C. Publicity of Proceedings' (*Lexis.com*2019) <https://advance.lexis.com/ document/?pdmfid=1522468&crid=cd6615e8-849a-4a30-a4a2d33e1c31f913&pddocfullpath=%2Fshared%2Fdocument%2Fanaly tical-materials-my%2Furn%3AcontentItem%3A5SD9-YDN1-F27X-60CG-00000-00&pdcontentcomponentid=347124&pddoctitle= C.+Publicity+of+Proceedings&pdteaserkey=sr0&pdicsfeatureid= 1521734&pditab=allpods&ecomp=zxsrk&earg=sr0&prid=5d607872-fb96-4dacaed4-8d8eaef13c36> accessed 2 March 2023
- 'Computer Evidence in Malaysia: Where Are We? [2013] 3 MLJ Xxxiii' (*Lexis.com*2013) <https://advance.lexis.com/document/?pdmfid=1522468&crid=793ff270-01d3-4c96-a412-0b9663444cfd&pddocfullpath=%2Fshared%2Fdocume nt%2Fanalytical-materials-my%2Furn%3AcontentItem%3A5RHW-9901-JNY7-X0NY-00000-00&pdcontentcomponentid=235220&pddoctitle= Computer+Evidence+in+Malaysia%3A+Where+are+We%3F+%E2%80%94+% 5B2013%5D+3+MLJ+xxiii&pdteaserkey=sr1&pdicsfeatureid=1521734&pditab =allpods&ecomp=zxsrk&earg=sr1&prid=baa0dbd7-dc65-4833-98a7fa09a25ccbf2> accessed 5 March 2023
- 'E-Shariah in Malaysia: Technology Adoption within Justice System | Emerald Insight' (2013) 7 Transforming Government: People, Process and Policy 256 <<u>https://www.emerald.com/insight/content/doi/10.1108/17506161311325396/full/ html?skipTracking=true> accessed 31 July 2022</u>
- 'Online Intermediary Liability in Malaysia: From Delfi to Malaysiakini [2021] 3 MLJ Cclxxx' (Lexis.com2021) <https://advance.lexis.com/document/ teaserdocument/?pdmfid=1522468&crid=d78bb255-1863-4886-bc7e-46adf2d53775&pdteaserkey=h1&pdicsfeatureid=1521734&pditab=allp ods&pddocfullpath=%2Fshared%2Fdocument%2Fanalytical-materials-

my%2Furn%3AcontentItem%3A63DB-9DJ1-JGHR-M33K-00000-00&ecomp=z xsrk&earg=sr24&prid=2a4a8857-efb0-4a60-a762-109276b88a88> accessed 8 March 2023

- 'Provisions of the Supreme People's Court on Several Issues Concerning the Trial of Judicial Review of Arbitration Cases (最高人民法院关于审理仲裁司法审查案件若 干问题的规定) (2017) – China Justice Observer' (www.chinajusticeobserver.com) <https://www.chinajusticeobserver.com/p/provisions-of-the-spc-on-severalissues-concerning-the-trial-of-judicial-review-of-arbitration-cases> accessed 13 December 2022.
- 'Transforming Legal Education Teaching and Learning: The Remote Communication Technology [2021] 2 MLJ Cxxxvii' (*Lexis.com*2021) <https://advance.lexis.com/ document/teaserdocument/?pdmfid=1522468&crid=d90ce449-88a4-464daa59-4c98ffb4ab37&pdteaserkey=h1&pdicsfeatureid=1521734&pditab=all pods&pddocfullpath=%2Fshared%2Fdocument%2Fanalytical-materials-my %2Furn%3AcontentItem%3A62JG-VK11-FD4T-B1VP-00000-00&ecomp=zxsrk&ea rg=sr0&prid=baa0dbd7-dc65-4833-98a7-fa09a25ccbf2> accessed 5 March 2023
- 'Tupac Lives! What Hologram Authors Should Know about Intellectual Property Law' (Americanbar.org2012) <https://www.americanbar.org/groups/business_law/ publications/blt/2012/09/02_moser/> accessed 13 November 2022
- Kim K-J and others, 'Holographic Augmented Reality Based on Three-Dimensional Volumetric Imaging for a Photorealistic Scene' (2020) 28 Optics Express 35972 <https://opg.optica.org/oe/fulltext.cfm?uri=oe-28-24-35972> accessed 30 July 2022
- Law C, 'Malaysia Embracing Technology in the Legal Industry "Adapt" or "Be Dropped". - Conventus Law' (Conventus Law2 April 2019) <<u>https://</u> conventuslaw.com/report/malaysia-embracing-technology-in-the-legal/> accessed 30 July 2022
- Marsh B, 'Tupac Hologram Rocks Coachella and IP Laws' (*American University* Intellectual Property Brief19 April 2012) http://www.ipbrief.net/2012/04/19/tupac-hologram-rocks-coachella-and-ip-laws/ accessed 13 November 2022
- McIntyre J, Olijnyk A and Pender K, 'Civil Courts and COVID-19: Challenges and Opportunities in Australia' (2020) 45 Alternative Law Journal 195 <<u>https://journals.sagepub.com/doi/full/10.1177/1037969X20956787</u>> accessed 24 August 2022
- Spaulding WC, 'Holographic Wills (Aka Handwritten Wills)' (*Thismatter.com*2022) <https://thismatter.com/money/wills-estates-trusts/holographic-wills.htm> accessed 29 July 2022
- Staff T, 'I See (Virtual) Dead People: Tupac Shakur and the Right of Publicity' (*TheWrap*25 April 2012) <<u>https://www.thewrap.com/i-see-virtual-dead-people-tupac-shakur-and-right-posthumous-publicity-37267</u>/> accessed 13 November 2022
- Steele C, 'Google Glass' (*IoT Agenda*2019) <https://www.techtarget.com/ iotagenda/definition/Google-Glass#:~:text=Google%20Glass%20is%20a%20 wearable,inputs%20to%20provide%20relevant%20information.> accessed 30 July 2022

AUTHORED BOOK

'Basics of Holography' (Google Books2013) <https://books.google.com.my/ books?hl=en&lr=&id=K658764HVUIC&oi=fnd&pg=PR11&dq=hologra phy&ots=T-NBDtMQZD&sig=W9lv35pvRIMph_Xu51Pj4kzyMSY&redir_ esc=y#v=onepage&q=holography&f=false> accessed 15 June 2022. 'Cybersecurity in Poland' (Google Books2022) <https://books.google.com. my/books?id=JcpKEAAAQBAJ&printsec=frontcover&dq=meaning

+of+cyberspace&hl=en&sa=X&ved=2ahUKEwiWkrG8q8X9AhXl 1zgGHUu9CuUQ6AF6BAgDEAI#v=snippet&q=virtual%20place&f=false> accessed 5 March 2023

- 'Cyberspace Sovereignty' (Google Books2018) <https://books.google. com.my/books?id=_9ddDwAAQBAJ&pg=PA51&dq=meaning+of+ cyberspace&hl=en&sa=X&ved=2ahUKEwiWkrG8q8X9AhXl1zg GHUu9CuUQ6AF6BAgFEAI#v=snippet&q=virtual%20place&f=false> accessed 5 March 2023
- 'Ethics in Cyberspace' (*Google Books*2023) <https://books.google.com.my/books? id=o2lJgtU2kyYC&pg=PA70&dq=meaning+of+cyberspace&hl=en&sa=X&ved= 2ahUKEwiWkrG8q8X9AhXl1zgGHUu9CuUQ6AF6BAgHEAI#v= onepage&q=virtual%20place&f=false> accessed 5 March 2023
- 'Judges, Technology and Artificial Intelligence' (*Google Books*2015) <https://books. google.com.my/books?id=cdEtEAAAQBAJ&pg=PA103&lpg=PA103&dq=Online+Dis pute+Resolution+Advisory+Group,+%E2%80%98Online+Dispute+Resolution+ for+Low+Value+Civil+Claims%E2%80%99+(Report,+Civil+Justice+Council,+ February+2015)+6%E2%80%937.&source=bl&ots=HSaWFss4Pq&sig=ACfU3U0FK U0HsjdBPe7DJZzZ6gFrR9k72Q&hl=en&sa=X&ved=2ahUKEwi_2qjZ2qL5AhVg R2wGHejnCwIQ6AF6BAgCEAM#v=onepage&q=Online%20Dispute%20 Resolution%20Advisory%20Group%2C%20%E2%80%98Online%20Dispute%20 Resolution%20for%20Low%20Value%20Civil%20Claims%E2%80%99%20 (Report%2C%20Civil%20Justice%20Council%2C%20February%202015)%20 6%E2%80%937.&f=false> accessed 31 July 2022

INTERNET (URL)

- '3D Optical Systems Group' (*Mit.edu*2022) <<u>http://web.mit.edu/optics/www/</u> holgraphy.htm> accessed 30 July 2022
- 'Best Legal Document Automation Software #1 Document Automation for Law Firms' (Lawmatics | Engage, Convert, Nurture, Grow • Best in class Client Intake and Marketing Automation for the modern law firm12 March 2021) <https:// www.lawmatics.com/document-automation/> accessed 31 July 2022
- 'Dubai Courts increases IT effectiveness by using assyst' (*IFC.com*2021)
- 'HHS Lawyers and Legal Consultants' (*Lawyers in Dubai* | *Legal Consultants in Dubai*26 September 2021) <<u>https://hhslawyers.com/blog/dubai-virtual-court-in-the-</u> middle-east-for-labour-disputes/> accessed 30 August 2022
- 'Holograms in Real Life: How the Technology Works and Industry Use Cases' (Respeecher.com2021) <https://www.respeecher.com/blog/holograms-real-lifetechnology-works-industry-use-cases> accessed 31 July 2022
- 'JP Morgan COIN: A Bank's Side Project Spells Disruption for the Legal Industry Technology and Operations Management' (*Technology and Operations Management* 2018) https://digital.hbs.edu/platform-rctom/submission/jp-morgan-coin-a-banks-sideproject-spells-disruption-for-the-legal-industry/ accessed 31 July 2022
- 'LawCite' (Austlii.edu.au2015) <http://www5.austlii.edu.au/cgi-bin/ LawCite?cit=%282015%29%2024%20Journal%20of%20Judicial%20 Administration%20227> accessed 31 July 2022
- 'Lawyers on Demand: A Matchmaking Platform' (*Simpleweb*2022) <https:// simpleweb.co.uk/case-studies/lawyers-on-demand-a-matchmaking-platform/> accessed 31 July 2022
- 'Malaysian Bar' (www.malaysianbar.org.my) <https://www.malaysianbar.org.my/ cms/upload_files/document/Circular%20No%20003-2020.pdf> accessed 17 August 2022

- 'Navigate Litigation Finance | Bloomberg Law' (*Bloomberg Law*29 July 2022) <<u>https://pro.bloomberglaw.com/litigation-finance</u>/> accessed 31 July 2022
- 'OpenMind' (*OpenMind*4 June 2015) <<u>https://www.bbvaopenmind.com/en/science/</u> leading-figures/dennis-gabor-father-of-holography/> accessed 24 August 2022
- 'RemoteCourtHearings' (Adjd.gov.ae2019) <https://www.adjd.gov.ae/en/Pages/ RemoteCourtHearings.aspx> accessed 30 August 2022
- 'Session Details' (Dc.gov.ae2022) <https://www.dc.gov.ae/PublicServices/ SessionDetails.aspx?area_id=232&session_date=30-08-2022&hall_ number=27&lit_code=5> accessed 30 August 2022
- 'UAE Legal Amendments During the COVID-19 Pandemic' (Irfan Ali Thanvi2022) <https://thelawbrigade.com/wp-content/uploads/2022/05/Irfan-Ali-Thanvi-LPR. pdf> accessed 30 August 2022
- 'What Is a Refractive Index/Phase Modulation?' (*Quora*2022) <https://www.quora. com/What-is-a-refractive-index-phase-modulation> accessed 31 July 2022
- 'What Is Contract Management Software?' (Juro.com2022) <https://juro.com/learn/ contract-management-software> accessed 31 July 2022
- <https://www.axiossystems.com/hubfs/assyst%20Case%20Studies%20IFS%20 branded/IFS_CS_Dubai%20Courts_01_2021.pdf?hsLang=en> accessed 30 August 2022
- Bailey J, 'Top 5 Uses of AI in Case Management: How AI Helps Large Organizations' (Armedia29 October 2018) <<u>https://armedia.com/blog/top-uses-ai-in-case-</u> management/> accessed 31 July 2022
- Conlin B, 'The Fundamentals of Contract Management' (*Business News Daily*13 August 2019) <<u>https://www.businessnewsdaily.com/4813-contract-</u> management.html> accessed 31 July 2022
- Desk Reporter, '1st Virtual Court in Middle East to Handle Labor Litigations' (*Emirati Times*26 September 2021) <<u>https://emiratitimes.com/1st-virtual-court-in-</u> middle-east-to-handle-labor-litigations/> accessed 30 August 2022
- Edgar Alan Rayo, 'AI in Law and Legal Practice a Comprehensive View of 35 Current Applications | Emerj' (*Emerj*20 May 2019) <<u>https://emerj.com/ai-sector-overviews/ai-in-law-legal-practice-current-applications/</u>>
- Geronimo A, 'UAE's Jafza Introduces vr Smart Court to Handle Labour Litigation' (TahawulTech.com6 August 2019) <https://www.tahawultech.com/region/uae/ uae-jafza-vr-smart-court-handle-labour-litigation/> accessed 30 August 2022
- INFORRM, 'Covid-19, the UK's Coronavirus Bill and Emergency "Remote" Court Hearings: What Does It Mean for Open Justice? – Judith Townend' (Inforrm's Blog24 March 2020) <https://inforrm.org/2020/03/24/ covid-19-the-uks-coronavirus-bill-and-emergency-remote-court-hearingswhat-does-it-mean-for-open-justice-judith-townend/> accessed 24 August 2022
- No utilizar, 'History of Holography' (*NEWS BBV*A25 November 2015) <<u>https://www.bbva.com/en/history-of-holography/</u>> accessed 31 July 2022
- Simon J, 'How to Transform Your Remote Communication with Visuals [New Guide]' (*The TechSmith Blog*28 December 2020) <<u>https://www.techsmith.com/blog/</u> remote-communication-visuals/#:~:text=Remote%20communication%20is%20 a%20way,in%20a%20shared%20office%20space.> accessed 17 August 2022

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