The University of Hong Kong
Faculty of Law
AY2024 – 2025
(Semester 2)

Course Code: JDOC6212/ LLAW6212
Course Name: China Intellectual Property Law
Taorui Guan • 2025 Spring

Format: Take-home exam

INSTRUCTIONS

The exam contains two questions. You must answer both. Each of the questions is worth 50% of your final exam grade.

The exam will be available starting at 8:00 am, May 6, 2025. It is due no later than 11:59 pm, May 20, 2025.

When preparing your answer, you may read any material you wish. However, you may not consult in any way with any other person concerning any aspect of the exam. You do not need to do research beyond the scope of the content taught in this course; such research is unlikely to affect your grade.

If you want to quote text from statutes or cases, please locate and quote directly from the original source (e.g., the actual statute or case text), rather than quoting indirectly from materials such as lecture slides, summaries, or secondary sources. Quote statutes or cases only as needed to support your argument.

China is not a common law country, and case law is not binding. However, this exam is not about writing complaints, but memoranda. Therefore, you can refer to relevant cases to illustrate your point.

If you use GenAI for this exam, you must strictly adhere to the Faculty of Law Guidelines on Implementing the University Policy on GenAI.

All of the events described in these questions are fictional. When answering the questions, you should assume that all statements in the question are accurate. If you happen to know (or learn) about aspects of reality that are inconsistent with the question set forth, you should ignore that knowledge when framing your answer. If you find ambiguity in the question, do not ask for clarification. Instead, form your own interpretation to resolve the ambiguity and make that interpretation clear in your answer.

Question # 1

Game Science, a game studio based in Hangzhou, spent years developing Black Myth: Wukong, an action RPG released in August 2024. The game is inspired by the 16th-century Chinese novel Journey to the West, featuring the legendary Monkey King Sun Wukong. While the broad story framework and characters like Wukong stem from this public-domain legend, the developers created original content for the game – including new plotlines, dialogue, artwork, and software code unique to their vision. Black Myth: Wukong became a blockbuster, selling millions of copies within weeks of release and garnering critical acclaim. The project was a collaborative work: a team of writers, artists, and programmers at Game Science contributed, each adding creative elements to the final product.

During development, Game Science made deliberate efforts to ensure the game's content was sufficiently original despite its mythical inspiration. For example, lead writer Chen Wei penned an original subplot involving a new character, the Silver Dragon King, entirely absent from the classic novel. Lead artist Zhang Li crafted distinctive character designs and graphics – from Wukong's unique armor to never-before-seen monster designs – that went beyond traditional depictions. To speed up production, the team also experimented with an AI-based art generator. Using a tool called "ArtisanAI," they generated some background landscapes and minor NPC dialogue lines. These AI-generated elements were lightly edited by junior designers but not fully hand-crafted. All team members had employment contracts stating that Game Science holds all economic rights in any work created for the game, while the individual creators retain their personal authorship rights. The game's credits list the company as the copyright owner and acknowledge the key contributors by name.

As the release date neared, questions arose regarding the AI-generated artwork and dialogue. For instance, an atmospheric painting of a mountain temple (used as a background in one level) was almost entirely AI-generated, with minimal touch-ups by staff. A few quirky NPC lines written by AI were also included. Game Science is uncertain about the legal status of these AI-created portions – since no human was the direct "author" of those elements, it is unclear if they qualify as copyrightable subject matter under Chinese law. This uncertainty became more than theoretical when those very AI-generated background images and lines became popular online. Several bloggers and indie developers reused one of the AI-created temple background images in their own projects and memes, believing it might be free to use. Game Science wonders if it can claim any copyright in those AI-generated pieces, or if they fell outside copyright protection due to a lack of human originality.

Following the successful launch of Black Myth: Wukong, multiple external parties began using the game's content in unapproved ways, raising complex copyright issues. Game Science now faces several distinct scenarios:

1. Competing Game – A rival studio in Shenzhen, Red Phoenix Digital, rushed out a game titled Legend of Wukong just a few months after the release of Black Myth: Wukong. Legend of Wukong is a mobile action game clearly modeled on Game Science's title. Investigations revealed that Red Phoenix Digital had somehow obtained assets and data from Black Myth: Wukong. The rival game includes several 3D models, character designs, and even dialogue lines that appear identical or highly similar to those in Black Myth: Wukong. For example, the unique Silver Dragon King character that Chen Wei created shows up in Legend of Wukong with only minor cosmetic changes. Whole sections of code and art seem to have been copied — a fact accidentally confirmed when players discovered a hidden glitch in Legend of Wukong identical to one in Game Science's PC version. Red Phoenix Digital's marketing materials also took liberties: they produced a trailer for Legend that incorporated footage from Game Science's official Black Myth: Wukong trailer (including scenes of Wukong battling the Dragon King), and broadcast this trailer on local television and on their website. The rival studio distributed Legend of Wukong through an app download and website worldwide, without any license from Game Science.

When Game Science confronted Red Phoenix Digital, the rival executives denied wrongdoing. They claim that any similarities stem from the shared underlying myth of Sun Wukong, which is in the public domain. In their view, Game Science cannot monopolize the idea of a Monkey King game or common story episodes from Journey to the West. They pointed out that both games feature Wukong fighting a Tiger Demon and using the iconic iron staff weapon – scenes drawn from the classic novel, not invented by Game Science. Red Phoenix further argues that certain elements they copied might not even be protected: notably, they admitted using the mountain temple background image that had leaked online, assuming it was freely usable (unaware it was AI-generated content from the game). They insist that Legend of Wukong is their own creation apart from "some folklore elements anyone can use."

Despite these claims, it appears Red Phoenix had access to Game Science's proprietary materials – possibly via the same beta leaker or a former employee who joined Red Phoenix. Game Science strongly suspects outright copyright infringement, given the verbatim reuse of original code, art, and dialogue beyond mere mythical ideas. Game Science is preparing to sue Red Phoenix Digital in a Chinese court.

2. Live Streaming – On the game's launch weekend, a popular video game streamer named Liu Meng live-streamed his entire playthrough of Black Myth: Wukong on the Bilibili platform. Over two consecutive days, Liu Meng broadcast over 15 hours of gameplay, from the opening scenes to the final ending, accompanied by his commentary, jokes, and reactions in a video overlay. Tens of thousands of viewers watched these streams for free, and recordings were later made available on-demand. Liu did not have any license or permission from Game Science; he simply bought one copy of the game and then publicly performed and transmitted its content via the internet. Game Science's team observed that some consumers were watching the full story online instead of purchasing the game, and they worry this may have hurt sales (especially of the single-player story, which once viewed, might deter a purchase). The company had generally been tolerant of short clips and "let's play" reviews – in fact, they provided press kits to journalists and allowed gaming journalists to post brief gameplay snippets or screenshot images under fair comment and news reporting practices.

However, Liu Meng's comprehensive stream went far beyond a few clips; it essentially gave away Black Myth: Wukong's audio-visual experience in its entirety. When Game Science requested Liu to take down the archived videos, he responded that his stream was commentary and criticism on the game (he provided his own narration and critique during play) and thus should be considered a fair use. He also noted that he was not selling the footage itself – while he earned ad revenue and viewer donations on Bilibili, he argued that he was providing entertainment and critique, not pirating the game. Game Science is now evaluating whether Liu's streaming infringed their rights under Chinese Copyright law.

3. Fan Modding – A devoted fan community sprung up around Black Myth: Wukong soon after release. One fan in particular, Zhang Xiaoyu, developed an unofficial modification ("mod") for the PC version of the game. Zhang's mod, which he shared freely on a gamer forum, alters several aspects of the original game. Notably, it gives the Monkey King protagonist a comical alternate costume (a modern clown outfit) and modifies some of the dialogue to include internet meme references. It also introduces a new ending that Zhang wrote and coded himself, presenting a parody twist to the story. To install the mod, users must have the original game, but the mod files significantly change and add to the game's content. Within weeks, thousands of players had downloaded and applied Zhang's mod for amusement.

When Game Science learned of this, the development team had mixed reactions. Some designers were concerned that the mod diminishes the artistic integrity of their work – for example, artist Zhang Li was unhappy seeing his carefully designed Wukong character turned into a clownish figure in screenshots circulating online, feeling it distorted the image

of the character. The mod also essentially creates an unauthorized derivative work (an altered version of the game's story and look), and it was distributed publicly without any permission. On the other hand, the mod is non-commercial fan labor, and Zhang Xiaoyu claims he made it "just for fun" and for fellow fans' personal enjoyment. He argues that since he isn't charging any money and the mod requires a legitimate copy of the game, he isn't harming the company – he believes this falls under personal fair use or at least shouldn't be treated as serious infringement. Game Science must decide how to respond. They worry that allowing this mod (and others that may follow) could set a precedent that anyone can alter their game's content or create derivative works without approval, possibly undermining their future expansion plans or the public's perception of the original work. They are considering whether the mod violates their copyright. They are weighing if it is worthwhile to pursue legal action to enjoin distribution of the mod and seek remedies, or if doing so might provoke backlash from the fan community.

Assume you are legal counsel to Game Science. In a memorandum containing no more than 2,500 words, answer the following questions, explaining the reasoning underlying each of your responses:

1. Which elements of Black Myth: Wukong are protected by copyright under Chinese law?

2. In light of the rival studio's actions with Legend of Wukong, did Red Phoenix Digital infringe on Game Science's copyrights?

3. Regarding the live stream by Liu Meng, did his broadcast of the full gameplay and unedited footage of Black Myth: Wukong infringe on Game Science's economic rights? What defenses or exceptions might Liu Meng assert under Chinese copyright law?

4. Does the fan mod created and distributed by Zhang Xiaoyu infringe on Game Science's copyright?

5. What remedies measures are available to Game Science under Chinese copyright law?

If you need additional information to answer any of these questions, specify what that information is and explain why it is important to your analysis.

Question # 2

The wearable health device market is expanding rapidly, yet accurate heart-rate monitoring during physical activity remains a significant challenge. Many current devices rely on single-layer optical sensors that often produce errors when the device shifts or moves—errors that may lead to incorrect heart-rate readings. Inaccurate health data can harm users by providing misleading information for fitness or medical decisions and can ultimately damage a company's reputation in the market.

In response, NovaTech—a startup based in Shenzhen—developed a new sensor system designed to overcome these deficiencies. Their technology uses a "multi-layer sensor array" together with an adaptive filtering algorithm, aiming to reduce motion errors and provide more reliable heart-rate information. This innovation is considered important because it offers potential benefits in both consumer fitness devices and clinical monitoring applications.

NovaTech was founded in early 2020 by a team of engineers led by Ms. Alice Zhang. The company set out to solve the problem of motion interference in optical sensors for heart-rate monitoring. In simple terms, NovaTech's new technology uses several layers of light-emitting diodes (LEDs) and photodiode detectors arranged one behind the other. The idea is that if one layer does not capture the correct signal because of movement, another layer may still do so correctly. An adaptive algorithm then processes these signals to extract a clear heart-rate reading.

In June 2020, NovaTech filed two types of patent applications with the China National Intellectual Property Administration (CNIPA):

1. Invention Patent Application:
   This application explains the core sensor system. It covers a wristband that houses a sensor array, a multi-layer arrangement of optical components (with LEDs and photodiodes in a stacked format), and a control unit that runs the adaptive algorithm to filter noise.
2. Utility Model Application:
   This application was filed for the mechanical design of the sensor housing. The utility model was granted quickly in early 2021. However, after the invention patent

was granted in late 2023, NovaTech decided to abandon the utility model to focus on one enforceable patent. The resulting invention patent, identified as CN2020-XYZ, will be valid until 2040.

Excerpts from NovaTech's Patent Documentation

Patent Claims (CN2020-XYZ) Excerpts:

Claim 1:
A wearable heart-rate monitoring device, comprising:
(a) a wristband housing to be worn on a user's arm;
(b) a sensor array on an inner surface of the housing, the sensor array including optical emitter elements (LEDs) and optical detector elements (photodiodes) arranged in a multi-layer format, where the first layer is made up of LEDs and the second layer is made up of photodiodes arranged so that the light from the LEDs falls on the photodiodes; and
(c) a control module connected to the sensor array, which uses an adaptive filtering algorithm to process the detector signals and produce an accurate heart-rate reading during movement.

Claim 2:
The device of Claim 1, wherein the spacing between the layers is set at a predetermined distance to optimize the light diffusion and reduce interference between the sensor elements.

Patent Specification (CN2020-XYZ) Excerpt:

The invention relates to an improved wearable heart-rate monitoring device that functions well during physical activity. Traditional devices using a single-layer sensor are prone to motion errors. In one embodiment, the device uses a two-layer sensor array. In this arrangement, the LEDs in the first layer and the photodiodes in the second layer are positioned so they overlap, allowing better capture of the light even when the wearer moves. The adaptive filtering algorithm is designed to distinguish the correct heart-rate signal from the noise generated by motion.[1]

DragonBand Pro

DragonTech Ltd. is a long-established electronics manufacturer based in Guangdong. In mid-2023, DragonTech launched its new smartwatch called the DragonBand Pro. This device is promoted as a next-generation wearable that features a heart-rate sensor comparable to NovaTech's innovation. Detailed public descriptions of DragonBand Pro state that it employs a sensor system consisting of a single layer of LEDs and photodiodes.

[1] The specification includes diagrams of the sensor array layout and cross-sectional views of the wristband housing, as well as block diagrams of the control module. Test data included in the documentation shows a clear improvement in signal accuracy compared with one-layer designs.

Unlike NovaTech's design, DragonBand Pro uses a light-diffusing film placed immediately adjacent to the photodiode array. This film is intended to scatter the light from the LEDs, thereby helping to counteract the effects of motion. The display and overall design of DragonBand Pro are modern and sleek, with a focus on user comfort and a simplified internal sensor structure aimed at reducing production costs. DragonTech's product literature emphasizes that the use of the diffusing film is a novel approach to achieving similar performance improvements as the multi-layer system, while being more economical to produce. Technical descriptions available in public product manuals explain that the diffusing film is designed to capture more evenly distributed light even during rapid movement, ensuring that the heart-rate measurement remains stable.

Emergence of the Dispute

In early 2022, NovaTech and DragonTech engaged in private discussions under a non-disclosure agreement. NovaTech demonstrated its sensor system prototype to DragonTech, and both sides exchanged technical documents. However, while initial talks appeared promising, DragonTech later expressed concerns about the cost and complexity of manufacturing a multi-layer sensor array. With no formal collaboration reached, NovaTech went ahead and launched its fitness band featuring the patented sensor technology. The product prominently displays patent number CN2020-XYZ and highlights the innovative multi-layer design.

By mid-2023, DragonTech introduced the DragonBand Pro, which, based on public technical briefings and product manuals, seems to offer heart-rate monitoring capabilities similar to NovaTech's device. Although its sensor system appears less complex—with only a single layer combined with a light-diffusing film—its performance during movement and the overall user experience are described as being very similar to those of NovaTech's device.

Furthermore, DragonTech has brought forward information suggesting that ideas similar to NovaTech's invention had been described in earlier sources. They have pointed to:

1. A 2018 Academic Article:
   This article in the Journal of Biomedical Optics presents a wearable sensor that uses a dual-layer configuration to reduce motion-related measurement errors. The article includes simple diagrams and data that show improved accuracy with a two-layer method.
2. Earlier Utility Model Patents:
   Several Chinese utility model patents from 2016 to 2017 describe wearable heart-rate sensors that use multiple optical elements arranged around a central processing unit to boost performance. These patents outline sensor arrangements that appear similar in concept to NovaTech's multi-layer design.
3. Industry Publications:
   Industry white papers and technical reports from 2017 describe various methods to improve sensor performance, including replacing a physical second sensor layer with a light-diffusing film to achieve similar benefits at lower production costs.

Documents from DragonTech indicate that its engineers were aware of these earlier disclosures. A message from one DragonTech engineer in October 2022 mentioned that a dual-layer sensor could be realized either by stacking sensor elements or by applying a diffusing medium as a simpler alternative.

The Dispute Unfolds

In January 2024, NovaTech observed that DragonTech's DragonBand Pro was widely available in stores and online. Market research reports noted that consumers found it difficult to differentiate between NovaTech's fitness band and DragonTech's DragonBand Pro. NovaTech's technical team compiled a record of product images, internal test reports, and data from public sources showing that both devices achieve nearly identical heart-rate monitoring performance despite their structural differences.

Soon after, DragonTech initiated administrative proceedings with CNIPA to request the invalidation of NovaTech's patent CN2020-XYZ. In its petition, DragonTech argues that the ideas underlying NovaTech's patent—specifically the use of a multi-layer sensor system with an adaptive filtering algorithm—are not sufficiently novel or inventive when viewed against the backdrop of the academic article, earlier utility models, and industry reports described above. DragonTech also asserts that, because its own design uses a diffusing film to achieve similar results, NovaTech's claims are overly broad.

At the same time, NovaTech has filed a complaint asserting that DragonTech's DragonBand Pro infringes its patent.

Suppose you are legal counsel for NovaTech. In a memorandum containing no more than 2,500 words, answer the following questions, explaining the reasoning underlying each of your responses:

1. What is your view on the chances of defending patent CN2020-XYZ's validity?

2. Does DragonTech's DragonBand Pro infringes patent CN2020-XYZ? Outline the arguments NovaTech can use, and briefly assess the likelihood of prevailing on an infringement claim.

3. What strategic options (litigation, negotiated licensing, etc.) does NovaTech have for extracting commercial and competitive value from its patent CN2020-XYZ? Evaluate the potential benefits and risks of each option.

If you need additional information to answer any of these questions, say what that information is and why it matters.

End of Exam