



# EBU5608 Product Development and Management

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## Topic 13 – Managing Intellectual Property

# Agenda

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- Intellectual Property
  - Patents
  - Trademarks
  - Design
  - Copyright
  - Trade secrets



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## Product Development and law

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- During the product development process, it is essential to consider a variety of legal issues that may come up:
  - Protection of intellectual property
  - Licensing
  - Product liability
  - Cybersecurity and privacy
- The lecture will focus on the concept of Intellectual Property and provide examples from different jurisdictions



# Product Development and Intellectual Property

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- From the concept to the product itself, the value may be protected by different intellectual property rights
- This is especially the case in:
  - Phase 1 – Concept Development
    - Do any of the proposed concepts have scope for IP, e.g. is the invention **patentable**?
  - Phase 3 – Detail Design
    - Can the product be designed in such a way that aspects of it can be protected by **design rights**?

## Intellectual Property Strategy

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- Every innovative company should have an intellectual property (IP) strategy
- An IP strategy will evolve with a company's business goals and should be reviewed regularly
- An IP strategy is a company's plan of action to manage and protect its intangible assets
  - *Ideation process*
  - *Product / service development*
  - *IP Protection*
  - *IP Commercialization*

## Intellectual Property

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- Definition

- **Intellectual property**, often known as *IP*, refers to **intangible assets** created by human intellectual or creative activity.
- **Intellectual property rights (IPRs)** allow people to **own** their **creativity** and **innovation** in the same way that they can own **physical property**.
- The owner can **control** and be **rewarded** for the use of their *IP*, and this encourages further innovation and creativity to the benefit of us all.



## Value of Intellectual Property

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- There are many types of IP:
  - patents, trademarks, industrial designs and geographical indications (industrial property);
  - copyright
- Intellectual capital is recognized as the most important asset of many of the world's largest and most powerful companies; it is the foundation for the market dominance and continuing profitability of leading corporations.
  - K. King, World Intellectual Property Organization (WIPO)
- For Fortune 500 companies, the *value of IP ranges between 45% - 75%* of total assets.
  - Cisco Website

**How much  
intellectual  
property is  
there in a  
PlayStation?**



### **Patents**

PlayStation game controllers, robot playmates, and 3D technology are inventions which can receive patent protection.



<https://www.wipo.int/export/sites/www/socialmedia/en/docs/how-much-ip-is-there-in-playstation.pdf>

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### Trademarks

The PlayStation logo, name, and symbols are registered trademarks that allow the company to stand out from the competition.



### Designs

The look of the PlayStation console, controllers, and game interfaces are a key factor of the gaming experience – and can be registered designs.



## Copyright

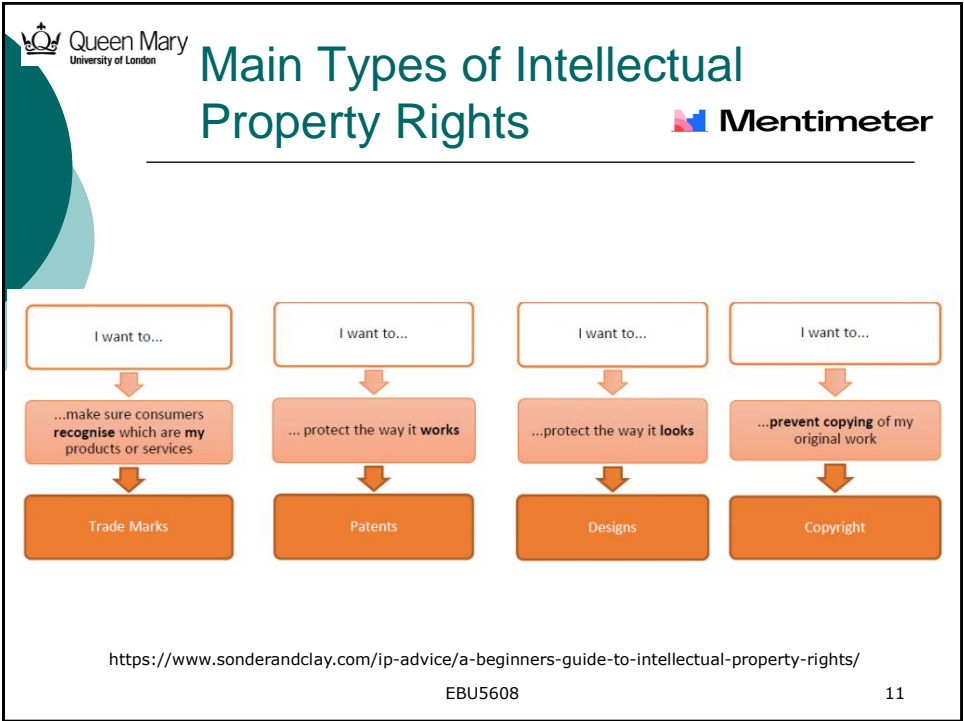
Storylines, music, characters, and code are creative assets that bring videogames to life – and receive automatic copyright protection.

## Trade secrets

Sony's strategy for the development, manufacture, and distribution of the PlayStation is confidential information – and protected through trade secrets.

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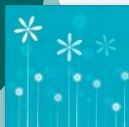


## Types of Intellectual Property



- The four main types of IP are:
  1. **patents** for **inventions**
    - new and improved products and processes that are capable of industrial application
  2. **trademarks** for **brand identity**
    - of goods and services, allowing distinctions to be made between different traders

## Types of Intellectual Property



### 3. **designs** for **product appearance**

- of the whole or a part of a product - resulting from the features of, in particular, the lines, contours, colours, shape, texture or materials of the product itself or its ornamentation



### 4. **copyright** for **original expression**

- literary and artistic material, music, films, sound recordings and broadcasts, live theatre performances
- include software and multimedia

## Patents – Overview

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- Rights conferred by the patent
  - Prevent others from making, using, offering for sale, selling or importing infringing products in the country where the patent was granted
  - Sell these rights or conclude licensing contracts
  - For up to 20 years from the date of filing of the patent application
  - Within a specific territory
- It does not grant any positive rights as such, for example, a right to commercialise the invention

## Patents – Subject matter

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- A patent is granted if there is an invention which:
  - is *new* (EU absolute, US relative)
  - is *not obvious* / *involves an inventive step* (EU & US)
  - is *not excluded subject matter* (EU exclusions, US statutory subject matter test)
- Patentable innovations include applied algorithms, display representation, menu arrangement, editing functions, control functions, user interface features
  - For example, a new way of communicating between avatars or a new hardware element incorporated into a controller

## Patents – Protection

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- Patents grant a very powerful, enforceable legal right
- On the other hand, have stringent legal requirements (novelty and inventive step)
- EPC Article 52 (1)(exclusions)
  - a) discoveries, scientific theories and mathematical methods;
  - b) aesthetic creations;
  - c) *schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;*
  - d) presentations of information.

It involves disclosure and the patent can be enforced only after being granted – the process may be long and expensive

Majority of patents in the games sector tend to focus on underlying technologies and hardware



## Patent Protection of Game Features

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- **Game Mechanics**
- Patent for the Nemesis system



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## Why should companies engage with patents?

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- Software-innovation patent 'playing field' for securing patent protection is becoming more level
- Software-innovation patents can be valuable and powerful monopoly rights, which present a *barrier to entry* for competitors, and/or present licensing opportunities for the proprietor
- Unlike copyright, there is no need to prove 'copying'
  - A defendant need only be practising the invention without permission to infringe
- The existence of a patent portfolio can be an important consideration for investors

## Trademarks – Overview

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- Purpose
  - give an indication of origin
  - give an indication of quality – for example Tesco Value, Rolls-Royce
  - advertising function
  - investment – it can be sold, assigned, licensed, and be subject to security
- Justification
  - the basic function is to denote the origin and quality and to reward the manufacturer who consistently produces goods of a particular quality
  - the monopoly granted can be unlimited, Bass plc registered a mark in 1876, the first mark to be registered in the UK and it is still valid today
  - personal property right

## Trademarks – Subject matter

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A trade mark may consist of any signs, in particular words, including personal names, or designs, letters, numerals, colours, the shape of goods or of the packaging of goods, or sounds, provided that such signs are capable of:

- a) distinguishing the goods or services of one undertaking from those of other undertakings; and
- b) being represented on the register in a manner which enables the competent authorities and the public to determine the clear and precise subject matter of the protection afforded to its proprietor.

(Directive 2015/2436 (Trade Mark Directive), Article 3)

# Global examples of trademarks



## Design law

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- Registered and unregistered designs (UK / EU), trade dress and design patents (US)
- Protects the appearance of a product (both physical and digital), from static icons to dynamic animated characters, interfaces, virtual spaces, etc. such as :
  - Box design
  - 3D models and environments
  - GUIs and icons

## Registered designs

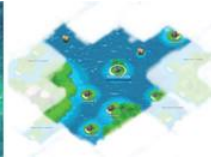
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- Legal requirements:
  - It must be novel
  - It must have an individual character
  - Designs do not protect features of appearance of a product which are solely dictated by its technical function

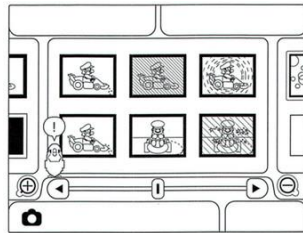
## Examples of registered designs in video games



Supercell (Boom Beach)



(Diep.io)



Nintendo (Mario Kart)



King (Candy Crush Saga)



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## Intellectual Property – Copyright



- Copyright protection extends only to expressions, and not to ideas, procedures, methods of operation or mathematical concepts as such
- For copyright to exist, the work has to:
  - **originate** from the author, and
  - fall within the protected subject matter, and
  - it has to be **fixed**
- The originality requirement does not require the work to be the expression of an original idea, but the way that the idea is expressed must be original

## Copyright – Subject Matter



- **Original literary, dramatic, musical and artistic** works, including computer programs and databases are protected by **copyright** for duration of the author's life + 70 years after their death
- **Sound recordings, films, broadcasts and cable programmes**, the typographical arrangement or layout of a **published edition** are protected by **related rights** for 50 years from the end of the calendar year in which the work was first made available to the public (except for films)



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## Copyright – Exclusive Rights



- It arises **automatically** from the moment it has been first recorded and does not require any formal registration
- Copyright grants **exclusive** rights such as to the right to reproduce the work, communicate it to the public, make it available, or distribute it
- A sonata will be protected as an authorial work by copyright, a sound recording of the sonata will be protected by related rights

<https://www.copyrightuser.org/educate/the-game-is-on/>  
<https://www.copyrightuser.org/create/creative-process/going-for-a-song/>

# Copyright – Computer Programs and Data



- Copyright protects the literal expression of computer programs – source code and object code – it does not protect the ideas underlying the computer program, functionality, programming language or data, which often have considerable commercial value
- Developing software requires considerable investment, however, they can be copied very easily and at a fraction of the cost needed to develop them
- The collection and organisation of data can be protected separately as a database



## Intellectual Property – Trade Secrets

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- Information is considered a trade secret if it:
  - is **secret** – in the sense that it is not (as a body or in the precise configuration and assembly of its components) generally known among, or readily accessible to, persons within the circles that normally deal with this kind of information;
  - has **commercial value** because it is secret; and
  - has been subject to reasonable steps (under the circumstances) to **keep it secret** by the person lawfully in control of the information (EU Trade secret Directive)

## Key takeaways

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- Intellectual property refers to **creations** of the mind, such as inventions; literary and artistic works; designs; and symbols, names and images used in commerce.
  - A **patent** is an exclusive right granted for an invention. It provides the patent owner with the **exclusive right** to decide how - or whether - the invention can be used by others. In exchange for this right, the patent owner makes technical information about the invention publicly available in the published patent document.

## Key takeaways

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- A **trademark** is a sign capable of distinguishing the goods or services of one enterprise from those of other enterprises.
- **Trade secrets** are IP rights on confidential information which may be sold or licensed.
- A **registered design** protects the ornamental or aesthetic aspect of a product.
- **Copyright** provides **exclusive** rights to creators over their works.

## Summary

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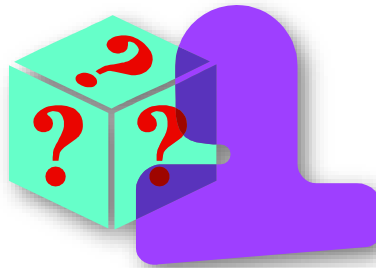
- Within the context of product development, the term intellectual property refers to the legally protectable ideas, concepts, names, designs, and processes associated with a new product.
- Intellectual property can be one of the most valuable assets of firms. Unlike physical property, intellectual property cannot be secured with lock and key to prevent its unwanted transfer; therefore, legal mechanisms have been developed to protect the rights of intellectual property owners. These mechanisms are intended to provide an incentive and reward to those who create new useful inventions, while at the same time encouraging the dissemination of information for the long-run benefit of society.





## Questions?

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Go to [www.menti.com](https://www.menti.com) to post your questions



## Reading

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- **Core Textbook** (Ulrich & Eppinger, 7th Edition)
  - Chapter 16. Patents and Intellectual Property  
**pages 337 - 354**



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