NYS SCIENCE+TECHNOLOGY

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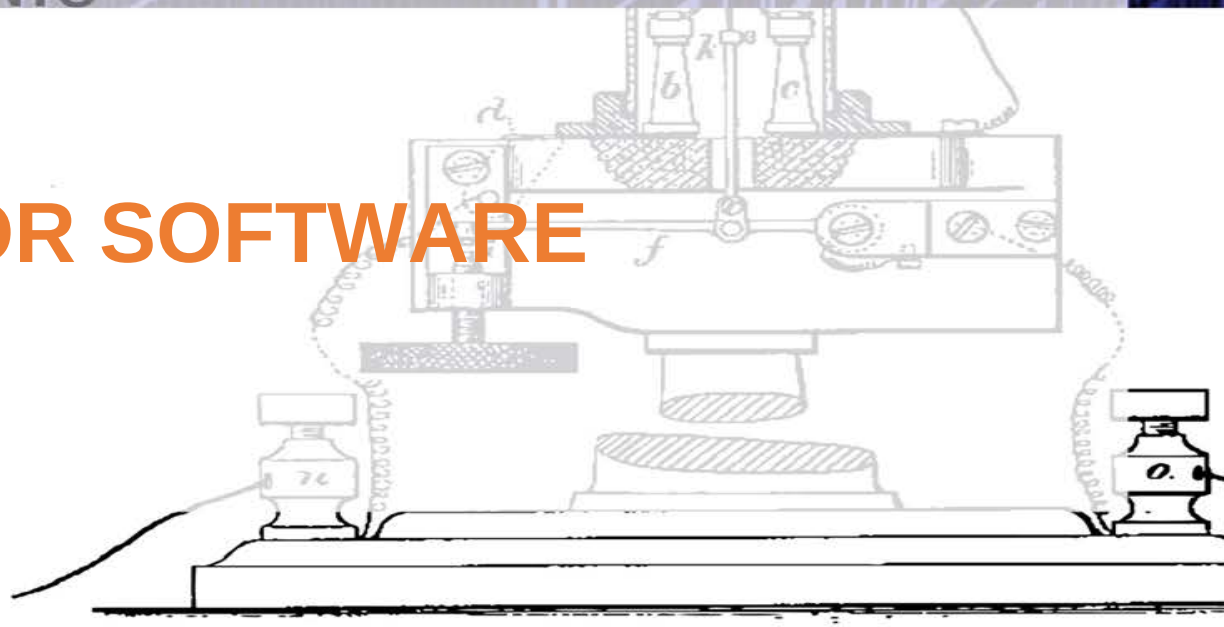
PRESENTS

IP PROTECTION FOR SOFTWARE



Types of IP Protection & their Application to Software

- **Patents**
- **Trade Secrets**
- **Copyrights**
- **Trademarks**

Patent Protection

- There are 3 main types of patents: **Utility**, Plant, and Design
- There are 4 principal acceptable subject matter categories that make up Utility patents. Abstract ideas, laws of nature, such as mathematical formulas, and natural phenomenon are not protectable as patents.
    - **Processes (Method) - Used for software**
    - Machines
    - Manufactures
    - Compositions of Matter
- 5 Elements to Receive a Patent
    - New
    - Useful
    - Non-Obvious
    - Patentable Subject Matter
    - Properly Disclosed

Patent Protection for Software

Process ("Method") Patent:

- Can protect a sequence of steps within a defined architecture.
- Protection is for the actual sequence (i.e. architecture, process, and flow) embodied in the source code.
- Can't patent an algorithm which is a computational formula.
  - But, a sequence of algorithms can be patented.
- Even if the USPTO agrees it is new, useful, *non-obvious* and properly disclosed, software patents are usually very narrow and application specific to avoid it being too generic or abstract.

Process Patent: Example

- **US Patent: US9539498B1**
  - **Mapping real world actions to a virtual world associated with a location-based game**

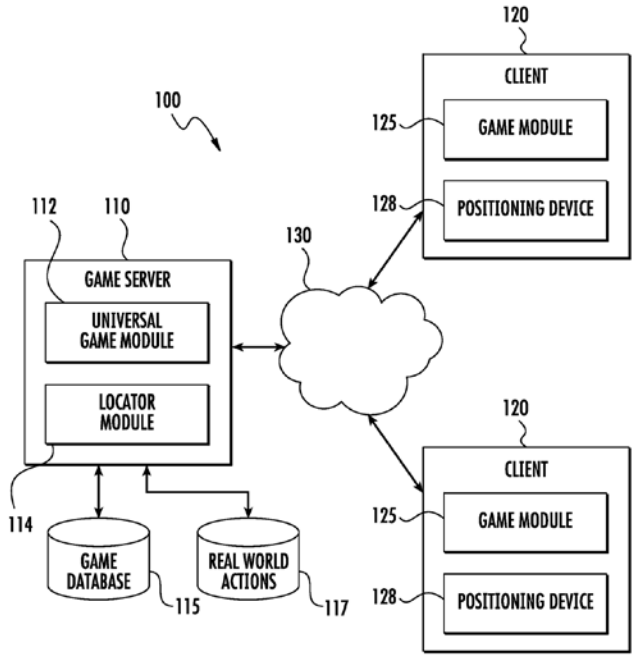


FIG. 1

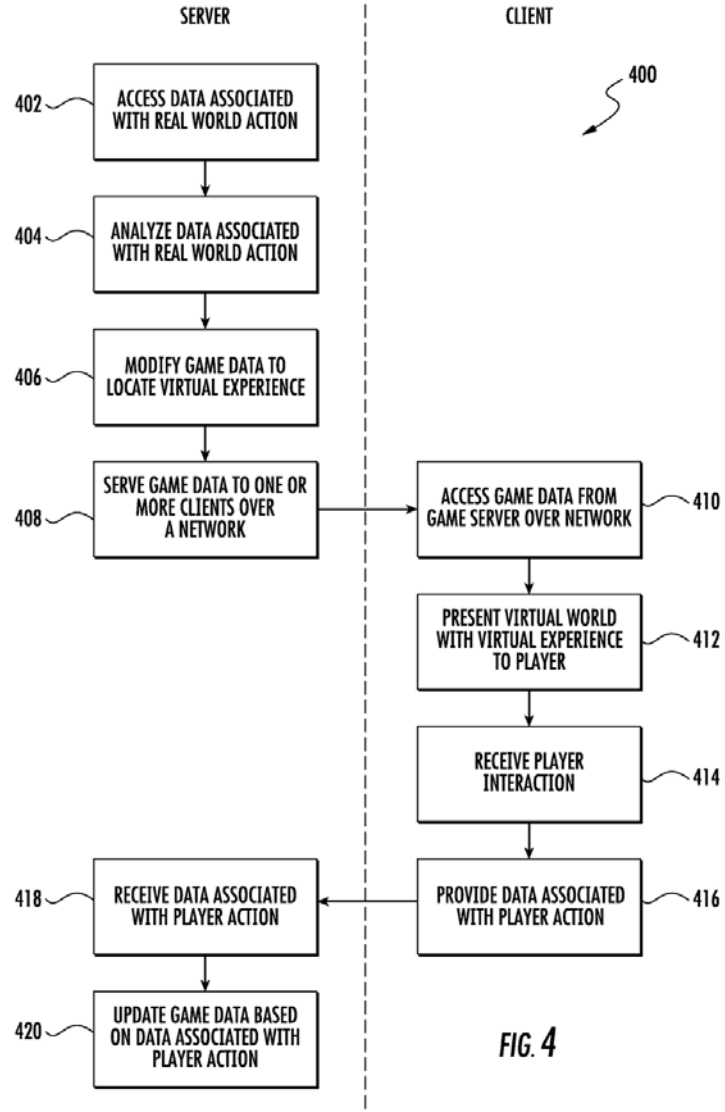


FIG. 4

Patents for Software Protection - Negatives

- Must disclose the architecture in the application
- Very difficult to know if it is being infringed
- Expensive
- Becomes open for use after 20 years
- Becomes public once application is published, even if not granted

Incentive for Patents for Software Protection

- Often pursued for defensive reasons
- Used to help gain investors

Trade Secret Protection

How does trade secret protection work?

The protected element must be secret and have value

1. Secrecy

- Must not be generally known or a common practice
- Must not be readily ascertainable
- Must not be easy to reverse engineer or independently invent
- Cannot be personal knowledge

2. Value

- Must have economic value
- Must provide a competitive advantage

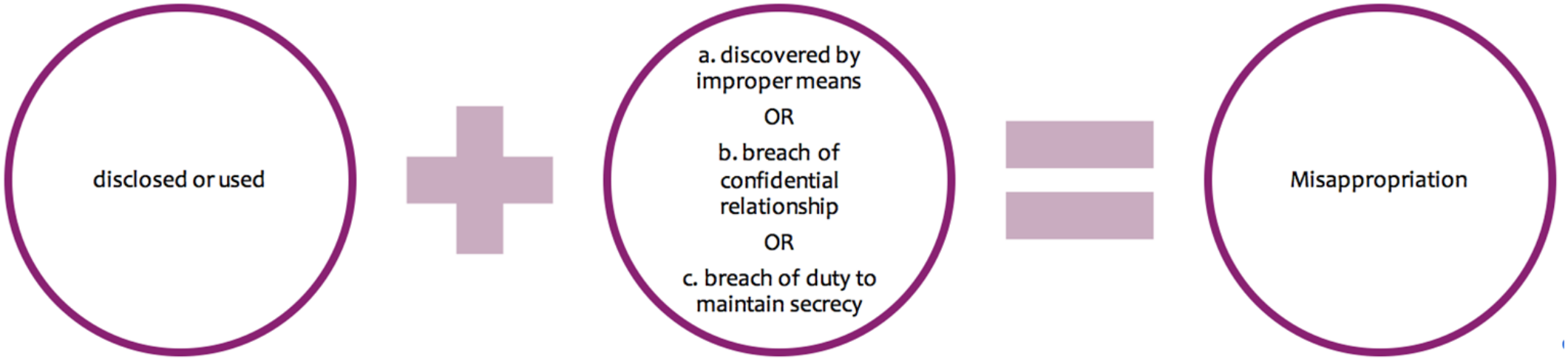
Trade Secret Protection

The protected element must be protected with adequate measures to maintain its secrecy. Examples include:

- Encryption
- Limits on the number of people who know or can access trade secret information
- label as secret or alarms or badges
- Distribute company phones or computers which must be sold back to company upon termination of employment agreement
- firmware
- software self-destruct feature (based on duration or copying)
- Secrecy Agreements: NDA; employment agreements; licenses

Trade Secret Protection

Legal Action for Misappropriation – Damages, Injunctive Relief



Important to document the trade secret

Trade Secret Protection

Advantages

- Duration
- No registration
- No requirement of novelty
- Protects a wider range of subject matter

Disadvantages

- Costs vary
- No protection against independent creation or reverse engineering
- Difficult to obtain recourse
- Once it is disclosed, it is no longer secret

Trade Secret Protection for Software

- Software source code can be protected as a trade secret
- Object code generally is licensed or sold to the purchaser
- Competitors can write their own code to accomplish same end
- Document time of creation of protected elements

Copyright Protection

- Copyright protects the original expression of ideas fixed in a tangible medium.
  - **Literary and artistic works category <u>includes software computer code</u>**
  - Musical works, dramatic works, pantomimes & choreographic works
  - Motion pictures and audiovisual works
  - Sound recordings
  - Architectural works
- Copyright is created the moment an expression is fixed in a tangible medium.
- A copyright owner cannot sue for infringement of his/her copyright until the copyright is **<u>registered</u>** (Copyright Act § 411(a)).
- A copyright is registered with the Copyright Office in the Library of Congress by filing the requisite copyright registration form and depositing the requisite copyright material.

Copyright Ownership

- Initial copyright ownership vests in original author of copyright work – unless copyright work is a “work made for hire” [Copyright Act § 201(a)].
- In the case of a **work made for hire**, the **employer** or other person for whom the work was made is considered the author of the copyright [Copyright Act § 201(b)].
- Courts have held that in order for a copyright work to be a work made for hire, the creator of the work must be a **true employee**.
  - Employer must withhold taxes, pay unemployment insurance, etc.
  - The implication of these holdings is that a computer programmer retained by a company as a consultant is the owner of the copyright in the computer program, not the firm commissioning the development of the computer program.
  - Firm commissioning the development of a computer program, however, can always insist on an **assignment of the copyright** as a condition of the consulting contract.

Rights of the Copyright Owner

- The copyright owner has the exclusive right to:
  1. **reproduce** the copyrighted work;
  2. prepare **derivative works** based on the copyrighted work; and
  3. **distribute copies** of the copyrighted work by sale, rental, lease or other means [Copyright Act § 106(1)-(3)].
     a. Computer Copyright Act § 117
- The duration of copyright protection is generally the life of the author plus 70 years [Copyright Act § 302(b)].
- Works made for hire endure for either **95 years** after first publication or **120 years** from its creation, **whichever expires first**.

Copyright for Software

- Computer program code is protected as a “literary work” under the Copyright Act.
- “A **computer program** is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result” (Copyright Act § 101).
- **Source code** can be filed with the Copyright Office, although protection extends purely to the defined code, not to the function it provides.
  - A string of code that performs the same outcome, but is different from the copyrighted code will not be found to infringe.
- For computer software copyrights, the deposit material consists of specified portions of the program source code.
  - The Copyright Office allows portions of the program source code to be blocked out if they contain trade secrets.

Trademark Protection

- Generally a word, phrase, symbol, or design, or a combination thereof, that identifies and distinguishes the source of the goods of one party from those of others.
- Provides protection for the brand, but does not extend protection to the functional use of the good or service.
- Entities can use ™ before federally registering a mark. After having been granted a federally registered trademark, entities use ®.
- **In order for a mark to be protectable it must be:**
    - Distinct
    - Used in Commerce - Must be selling your product to gain trademark rights.

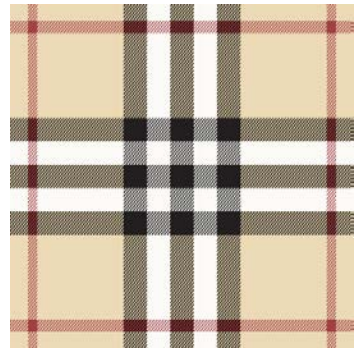
Nintendo

twitter

United States of America
United States Patent and Trademark Office

Google

PANDORA



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SERVICE MARK
PRINCIPAL REGISTER

GOOGLE INC. (DELAWARE CORPORATION)
2400 BAYSHORE PARKWAY
TRADEMARK DEPT
MOUNTAIN VIEW, CA 94043

FOR: DISSEMINATION OF ADVERTISING FOR OTHERS VIA THE INTERNET, IN CLASS 35 (U.S. CLS. 100, 101 AND 102).

FIRST USE 10-0-2000; IN COMMERCE 10-0-2000.

THE MARK CONSISTS OF STANDARD CHARACTERS WITHOUT CLAIM TO ANY PARTICULAR FONT, STYLE, SIZE, OR COLOR.

NEW YORK STATE OF OPPORTUNITY. Division of Science, Technology & Innovation

TESS (Trademark Electronic Search System) Search

- Before using ™ to protect your brand, complete a TESS search to assure that you will not be infringing anyone's trademark.
- Completed through the USPTO website.
- Can start using the mark as a ™ in commerce to see if people like it, then register the mark eventually (after performing another TESS search).
- By having used the mark for several years in commerce, secondary (becomes distinct) meaning may have been established.

http://tess2.uspto.gov/bin/gate.exe?f=tess&state=4806:h4tdvy.1.1

Trademarks (cont.)

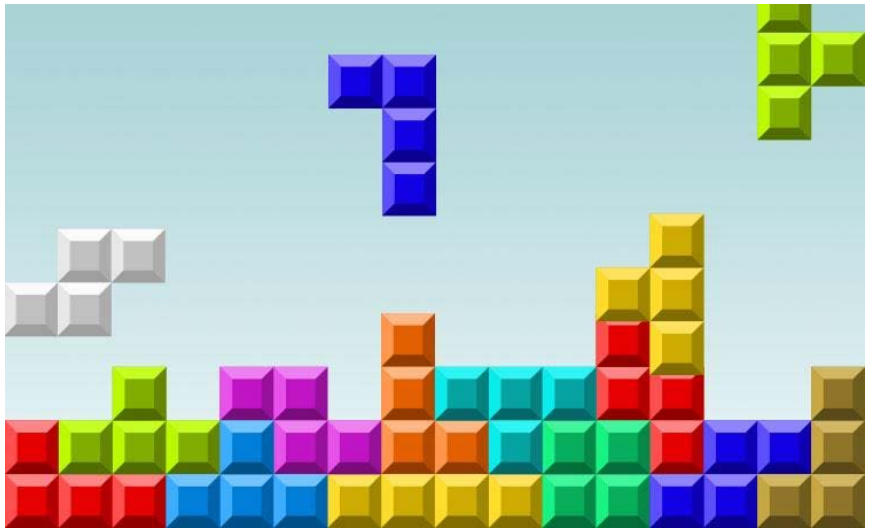
- **Type of Mark - Spectrum of Distinctiveness**
  - **Generic**
    - Generically identify a product (ex. smartphone, aspirin)
    - Unable to receive a trademark
  - **Descriptive**
    - Marks that merely describe the services or goods on which the mark is used (ex. Digital for computers)
    - Requires Secondary Meaning to receive a trademark
  - **Suggestive**
    - Marks that suggest a quality or characteristic of the goods and services (ex. Microsoft [suggestive of software for microcomputers])
  - **Arbitrary**
    - A mark having a common meaning that has no relation to the goods or services being sold (ex. Apple)
  - **Fanciful**
    - A mark that has been invented for the sole purpose of functioning as a trademark and has no other meaning than to act as a mark (ex. Kodak)

Trademarks (cont.)

Trade Dress

- Subset of trademark that protects the “total image and overall appearance” (shape, color, graphics), the look and feel of the software, to promote the overall brand.
- A product design can be trademarked if it has acquired distinctiveness or has secondary meaning.

Example: Tetris



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