Slide 1:

"Intellectual Property & Horizon 2020:

How to deal with your intellectual Assets"

IPR in Software & IT

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Istanbul, 13.9.2017

Slide 2:

Some facts on IPR in ICT

- ICT-patents **> 38%** of Total
  (under Patent Cooperation Treaty)

- **Patent Thickets** problem
  Dense web of overlapping IPR that a company must hack its way through in order to commercialize new technology

- Digital Tech makes **derivatives** much easier

- **IP Bundles** (consider all tools)

- What about **databases** and **data**?

- What about design, functionality, UI/UX?

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Slide 3:

Patent Wars

PRODUCTS INVOLVED IN THE TRIAL:
iPhone 3G
iPhone 3GS
iPhone 4
iPad 2 3G
iPod Touch

Photos: El Tiempo/Zuma Press (Galaxy S); Apple (iPhone 4)
The Wall Street Journal
Source: WSJ research

Samsung Says...
...THE IPHONE 4 INFRINGES THESE PATENTS:

PATENT '516
Manages the phone's resources and battery by prioritizing data

PATENT '941
Provides a way to package and transmit data more efficiently

Apple Says...
...THE GALAXY S INFRINGES THESE PATENTS:

PATENTS '087, '677
Ornamental design of the iPhone

PATENT '305
Rounded square icons on interface

Captivate
Continuum
Droid Charge
Epic 4G
Exhibit 4G
Fascinate
Galaxy Ace
Galaxy Prevail
Galaxy S
Galaxy S 4G
Galaxy S II (AT&T)
Galaxy S II (i9100)
Galaxy S II (T-Mobile)
Galaxy S II (Epic 4G)
Galaxy S II (Skyrocket)
Galaxy S Showcase
Galaxy Tab
Galaxy Tab 10.1 (WIFI)
Galaxy Tab 10.1 (4G LTE)
Gem
Indulge
Infuse 4G
Intercept
Mesmerize
Nexus S 4G
Replenish
Transform
Vibrant

PATENT '711
A method allowing multi-tasking while playing music on the phone

PATENT '460
Taking and emailing pictures using a scroll action

PATENT '893
Switching between pictures in a gallery and the camera

PATENT '163
Enlarging documents by tapping the screen

PATENT '915
Distinguishes between single-touch and multi-touch gestures

PATENT '381
'Bounce-back' feature when scrolling beyond the edge of a page

Amazon's 1-click patent

- Issued in 1999
- Never granted in Europe
- 2000 Licensed to Apple
- Considered one of biggest "game-changers" in e-commerce
- Expires in 2017
- Increased conversion rate (increased sales)
- Benefit to Amazon > $40m / annually operating income (unofficial estimation)

User bypasses the cart.

Buy new: $308.34

Qty: 1 ▼

Add to Cart

or 1-Click Checkout

Buy now with 1-Click®

Order within 18hr 25min to get it:
Friday, July 1
(Free Standard Shipping)

But, can you submit a patent? Yes, but.

- Must meet patentability requirements
- Still depend on Jurisdiction
- **In Europe**: Claim must define: **Technical solution to technical Problem**
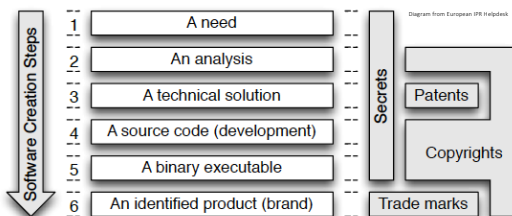
✅ *Method and apparatus for switching touch screen of handheld electronic apparatus EP 2184671 A1*

❌ *Method for encouraging customers to buy local by giving a discount on future purchases.*

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So what can we protect?

SW development is a process

Software Creation Steps
1 A need
2 An analysis
3 A technical solution
4 A source code (development)
5 A binary executable
6 An identified product (brand)

Secrets
Patents
Copyrights
Trade marks

Diagram from European IPR Helpdesk

- How can we protect our code ?
- Does it protect the functionality of the program?
- Functionality of computer program cannot be protected by copyright.

Your IPR Toolkit for SW

Tools	What	Registration
Copyright	All Creative : Code, user guides, icons, graphical elements	AUTOMATIC
Patent	Functionality, new inventive technical effects	YES* (US, Debatable in EU)
Trademark	Logo, name (Visual & Textual)	YES (EUIPO)
Industrial Design	Graphic User Interface (GUI) under requirements	RECOMMENDED (EUIPO)
Database Rights	Output of process	NO
Contractual Agreements	Secrets, Confidential Info	NO

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© Copyright

REMEMBER:
- Copyright protects only source code.
- Functionality / Programming language / Data Format not protected
- **Law ensures your rights, as long as you can <u>prove</u> you are the author.**

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Copyright (copyleft and share alike)

Copyright: the right to copy a work (including software code).

Hard to enforced so traditionally managed through technology e.g. Releasing .exe files not source code.

Copyleft: is a general method for making a program (or other work) free, and requiring all modified and extended versions of the program to be free as well.

Share alike: copies or adaptations of the work to be released under the same or similar licence as the original.

Nothing similar yet in Europe. How could you do it by yourselves?
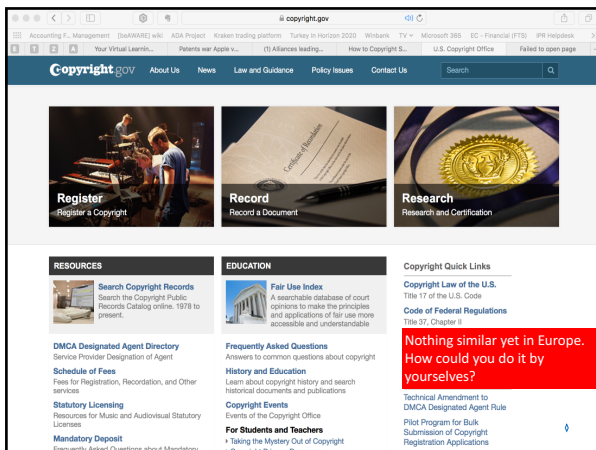
Patentability Filter: Technical Character (EPO)

- 3 Expert examiners
- Search Report + Patentability Requirements
- **Are there technical features that solve a technical problem?**
  - E.g. smart grids, security, data compression, secure payments
- **Non-technical features cannot contribute to inventive step**
  - Mere interaction with tech elements not enough
- **Business/Model Innovation + Technical solution**

What about Trademarks?

- You can **protect the name, logo or slogan/tagline of your software**
  - Stand out, differentiate from other products
  - Can be owned, sold and licensed
  - Open Source licenses don't license trademarks
- Be careful when you use other trademarks:
  - *e.g. if you want to use a third party trademark in your product (e.g. Android) you have to follow company's guidelines.*

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Can I file it? YES, you can.

EUIPO
EUROPEAN UNION
INTELLECTUAL PROPERTY OFFICE

File a European Union trade mark using the Five-step application

fast track

Our Fast Track option for registering your trade mark

- Create and submit your application in 10 minutes.
- We will guide you step by step through the application procedure.
- You can save your application at any time during the process.
- Get your application published in half the time or less compared with regular applications. Find out more about Fast Track.

Choose your language:

English (en)

Start application

https://euipo.europa.eu/ohimportal/en/apply-now

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To sum it up

- Abstract ideas **not** protected
- Copyright protects **concrete** elements not functionality
- Patents protect **functional** aspects but:
  - Technical solution new, inventive, over prior art
- Patents can be prevented by defensive publication
- Trademark can protect your "brand"

What is a SW licence?

- A permit to do something that is not legal otherwise (Driving license / Software license)
- Describes copyright and patent holders promise to use their IP
- Open Source Initiative approves OS licenses
  http://www.opensource.org/licenses/

Rights Reserved

None/Few — Some — All

Free Software/Open Source Licences | Proprietary Licenses

| Public Domain | Academic Licences | Contextual Licences | Reciprocal Licences | FreeWare/ Shareware | Other |

Diagram from European IPR Helpdesk

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What does Free (in SW) mean?

- **Free to run** the program for any purpose
- **Free to study** and **change** the code to adapt it to your own needs
- **Free to redistribute** <u>unmodified</u> copies with no restriction
- **Free to distribute** <u>modified</u> versions (Derivatives)

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Free vs. Open Source Software
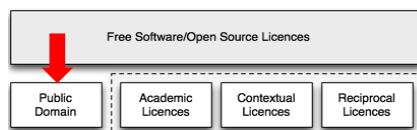
Almost, but not exactly the same.

Open Source	Free Source
A developed methodology	A social movement
Focus on economic/business argument	Moral, ethical argument
Good for business	Good for your social values
https://opensource.org	http://www.fsf.org
OSI approved: Apache, BSD, MIT, Mozilla, CDDL, GNU, EPL	GNU LICENSES "GNU's Not Unix." "GNU" is pronounced g'noo

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Public Domain

- This work has been **identified** as being **free of known restrictions under copyright law**, including all related and neighboring rights.
- You can copy, modify, distribute and perform the work, even for **commercial purposes**, all **without asking permission**. See **Other Information** below.

https://creativecommons.org/publicdomain/mark/1.0/

Free Software/Open Source Licences

Public Domain	Academic Licences	Contextual Licences	Reciprocal Licences
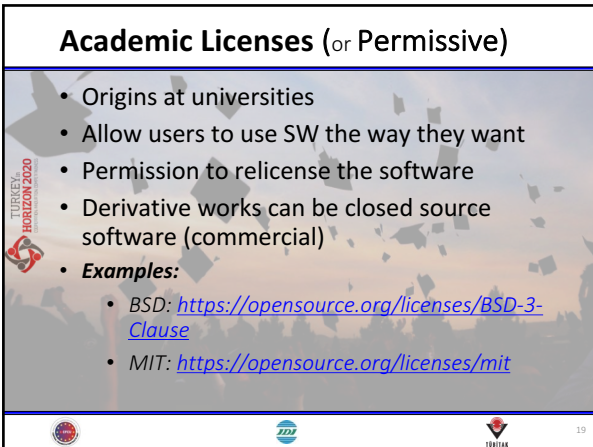
Academic Licenses (or Permissive)

- Origins at universities
- Allow users to use SW the way they want
- Permission to relicense the software
- Derivative works can be closed source software (commercial)
- *Examples:*
  - *BSD: https://opensource.org/licenses/BSD-3-Clause*
  - *MIT: https://opensource.org/licenses/mit*
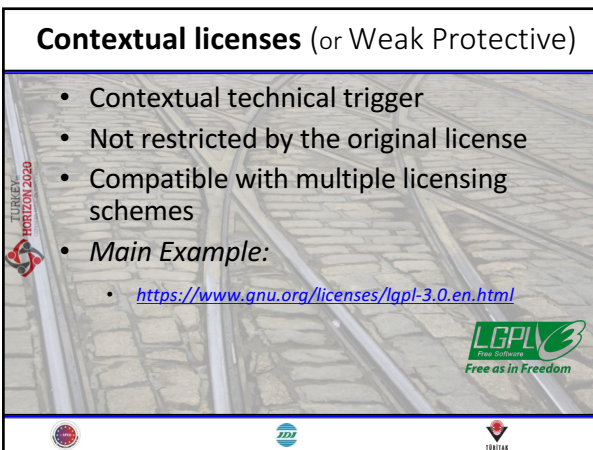
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Contextual licenses (or Weak Protective)

- Contextual technical trigger
- Not restricted by the original license
- Compatible with multiple licensing schemes
- *Main Example:*
  - *https://www.gnu.org/licenses/lgpl-3.0.en.html*

Reciprocal or copyleft (or Strong Protective)

- Derivative must be distributed under same license as original
- Secure a common investment
- *Examples:*
  - *GPL v3: https://www.gnu.org/licenses/gpl-3.0.en.html*
  - *EUPL v1.1: https://joinup.ec.europa.eu/community/eupl/og_page/eupl*
  - *RPL 1.5: https://opensource.org/licenses/RPL-1.5*

- *For more: https://www.copyleft.org*

Copyleft

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License compatibility

Permissive	Weakly Protective	Strongly
Public Domain	LGPL v2.1	GPL v2
MIT/X11	LGPL v2.1+	GPL v2+
BSD-new	LGPL v3 and v3+	GPL v3 and v3+
Apache 2.0	MPL 1.1	Affero GPL v3

Network Protective

Key: Arrow directionality represents compatibility (one-way)

http://2015.igem.org/Team:Cambridge-JIC/OpenHardwareRevolution

- **Must be compatible: able to contain software licensed under different licenses**
- *List of GPL compatible and incompatible licenses:*
  http://www.fsf.org/licensing/licenses/index_html#SoftwareLicenses

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Proprietary Licenses

Licensing   Product Licensing ·   Licensing Programs ·   Existing Customer ·   Learn More ·   How to Buy   Support ·

Microsoft Products and Services Agreement

The Microsoft Products and Services Agreement (MPSA) is a transactional licensing agreement for commercial, government, and academic organizations with 250 or more users/devices. MPSA works best for organizations that want to license Microsoft on-premises software, cloud services, or both as needed —with no organization-wide commitment under a single, non-expiring agreement. Software Assurance is optional.

Frequently asked questions

Overview

— What is the Microsoft Products and Services Agreement?

The Microsoft Products and Services Agreement (MPSA) consolidates purchasing of Microsoft cloud servic... Software Assurance. Suited for organizations with 250 or more users, MPSA provides a Purchasing Accoun...

Proprietary Licenses	
FreeWare/Shareware	Other

https://www.microsoft.com/en-us/Licensing

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Types of Proprietary Licenses

Various types of licensing:

End User	Node	Site	Network
Licensing to a specific individual	Licensing to a specific hardware	Licensing to a dedicated site	Floating licenses
Office365	Mac OS	MS Office	Adobe, SGI
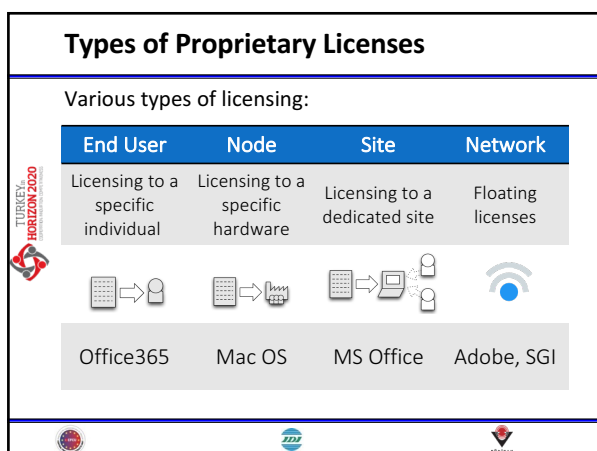
Use the tools: Document & Track

- Source Control
  - https://git-scm.com
  - https://github.com
- Dependency tracking, license compliance and attribution notices on autopilot
  - http://fossa.io
- Choose a license
  - https://choosealicense.com

Choose an open source license

Which of the following best describes your situation?

I want it simple and permissive.
The **MIT License** is a permissive license that is short and to the point. It lets people do anything they want with your code as long as they provide attribution back to you and don't hold you liable.

jQuery, .NET Core, and **Rails** use the MIT License.

I'm concerned about patents.
The **Apache License 2.0** is a permissive license similar to the MIT License, but also provides an express grant of patent rights from contributors to users.

Android, Apache, and **Swift** use the Apache License 2.0.

I care about sharing improvements.
The **GNU GPLv3** is a copyleft license that requires anyone who distributes your code or a derivative work to make the source available under the same terms, and also provides an express grant of patent rights from contributors to users.

Bash, GIMP, and **Privacy Badger** use the GNU GPLv3.

What if none of these work for me?

What about your data?

- Horizon 2020 requires **Data Management Plan (DMP)**
- **DMP** describes data management life cycle for all data sets collected, processed or generated by the research project.
- Needs description in the proposal

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Which Data?

- How you manage research data generated / collected during the project?
  - What types of data ?
  - What standards ?
  - How will data be exploited / shared / made accessible for verification and re-use?
    If data cannot be made available, why?
  - How will this data be curated and preserved?
- Appropriate CA to manage ownership / access to knowledge (IPR, data etc.).

What about your Databases?

- EC Directive on legal protection of Databases (D 96/9/EC)
  - Adopted in February 1996
  - New exclusive "sui generis" right for database
  - 15 years
  - Protect investment of time, money and effort *irrespective of whether the database is in itself innovative ("non-original" databases).*
  - Harmonised copyright law applicable to structure and arrangement of contents ("original" databases).
  - Both analogue and digital databases.

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Many tools to consider

https://creativecommons.org

Legally share your knowledge and creativity to build a more equitable, accessible, and innovative world.

https://opendatacommons.org

Provides legal solutions for open data.

Run by https://okfn.org

What is Open Access?

Practice of **providing on-line access to scientific information** that is free of charge to the end-user.

H2020:

- *Outline **strategy** for knowledge management and protection.*

- *Include measures to provide open access (free on-line access, such as the **'green'** or **'gold'** model) to peer-reviewed scientific publications.*

Open Access Publishing

GOLD: article immediately provided in open access mode by scientific publisher.

- *Associated costs by organisation to which the researcher is affiliated, or to the funding agency supporting the research.*

GREEN: Self-archiving. Article archived in online repository before, after or alongside its publication.

- *Access often delayed ('embargo period').*

- *Some scientific publishers may wish to charge for access during an exclusivity period.*

BOTTOMLINE: You have to think about it beforehand!

Beyond licensing

- *A full strategy for IP and innovation*
- *A business model*
- *An Exploitation plan*
- *Technology Transfer/Dissemination*

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Software and IPR: Want to know more?
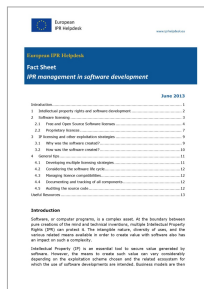
Useful Resource:

Fact-Sheet-IPR-Management-in-Software-Development.pdf

Sources and more reading

- The Open Source Definition:
  http://www.opensource.org/docs/definition.php
- Free Software Definition:
  http://www.fsf.org/licensing/essays/freesw.html
- Debian Free Software Guide:
  http://www.debian.org/social_contract#guidelines
- Categories of Free and NonFree Software:
  http://www.fsf.org/licensing/essays/categories.html
- OSI approved OS licenses: www.opensource.org/licenses
- GPL FAQ: http://www.gnu.org/licenses/gplfaq.html

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