

INTELLECTUAL PROPERTY TOOLBOX FOR MOBILE APPLICATIONS DEVELOPERS¹

2021

¹ The views expressed in the toolbox are the personal views of the authors. They do not represent the views of WIPO or its Member States.

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1. INTRODUCTION

This World Intellectual Property Organization (WIPO) IP Toolbox for Mobile App Developers has been created as part of a broader project on mobile applications and intellectual property (IP). It is designed to offer practical guidance to app developers and app developer associations, companies developing mobile applications, research hubs and others. The purpose of this toolbox is to present various tools on how to protect all or part of the IP in a mobile app. We explain the reasons why protection may be considered; we discuss which tools exist to achieve protection, their advantages and risks; and provide examples of such tools from different markets.

The toolbox is meant to give app developers a sound understanding of the basic IP tools available at the various stages of development of a mobile app, before they seek legal advice on the specificities of each tool in the relevant market. We present the tools according to the stages of development of a mobile app: 1) development of the application, 2) protection of the application, 3) commercialization tools and 4) tools to address infringement situations.

In each of these phases of app development, app developers need to consider how they want to protect the investment and intellectual work incorporated in the app. Intellectual property rights can be useful tools to protect parts of the mobile app against unauthorized use by third parties and to generate income by allowing third parties to use them against payment, through licensing or assignment. At the same time, app developers should consider IP rights vested in content created by others, when they want to incorporate that content in their app. Assessing which content is IP protected and seeking authorization from the right holders to use the content limits or avoids the risk of infringing others IP rights and being found liable of IP infringement. This toolbox sheds lights on these IP aspects of making, commercializing and enforcing mobile apps.

1.1. Approach and methodology of the toolbox

The approach is user-oriented. We guide app developers as to which tools are available at which stage of development and under what conditions. We explain each tool, provide context and hands-on knowledge on their functionality, and then present examples and templates to be used by app developers. We differentiate the various parts of the mobile application that may be subject to different protection tools.

The toolbox does not explain in detail what IP rights are, how they are conferred, or how they differ from one system to another, etc. Such background can be found in N. Shemtov's study on "IP and mobile applications" produced as part of this project.² The toolbox builds upon that knowledge and focuses on which tools exist, how to use them and where to find practical examples of them. The methodology used for the guide is

² Shemtov 2020, Intellectual Property and Mobile Applications, available at <u>https://www.wipo.int/export/sites/www/ip-</u> development/en/agenda/pdf/ip_and_mobile_applications_study.pdf

instructional and comparative-law based, combined with insights collected from previous studies, literature and information available within the project.

1.2. How to use the toolbox

The toolbox follows an intuitive approach. Section 2 "Mobile applications: an IP perspective" serves as a background. Readers of the guide who have no prior knowledge of IP are advised to read it. The toolbox is structured according to the lifecycle of a mobile application, from using content for the app, developing the app, disseminating the app and enforcing the IP in the app. A developer can choose the relevant stage for information about the tools that are available under certain circumstances in order to develop, protect and disseminate the app, as well as to address infringement of a right.

2. MOBILE APPLICATIONS: AN IP PERSPECTIVE

This background section differentiates various parts of a mobile application that are relevant for different IP tools. A mobile application consists of different parts. These parts can be derived from works protected by IP, such as built-in content, which may require authorization. At the same time, certain elements of a mobile app can in themselves be protected by different IP tools. This overview will help a reader who is not yet familiar with IP to understand why certain tools are available for one part of the mobile application but not for another part.

2.1. Mobile applications as a whole

Mobile applications can be considered as a complex multimedia process consisting of a combination of different elements of software code, text, images and sounds. These different elements that make up the app can be protected individually under IP laws.

2.2. Code and architecture

The IP regime does not differentiate between source code and object code. When IP tools are available for computer code, both source and object code can potentially be protected. It is important to note that IP distinguishes the code in its written form from its function or effect. The functionality of an app may be eligible under different types of IP protection, whereas the code in its written form may be eligible under copyright protection. Where code is rewritten or modified but still performs the same function, such modifications may require permission from the owner of the original code, even where the new code can benefit from protection in itself.

2.3. Esthetic and functional aspects of graphical user interfaces (GUI)

Graphical user interfaces (GUI) connect the application with the user. They comprise the textual and graphical elements that make up the appearance of screen displays. From an IP perspective, GUIs consist of distinct elements, such as icons, buttons, transitional animations, text and dialog boxes. These are distinct from the object code and source code that underpin the GUI and therefore can incur protection in themselves.

It is important to distinguish esthetic from functional components in the GUI. The IP tools available for one or the other are different and treat esthetic and functional components differently. We discuss both aspects of GUIs separately for relevant IP tools.

2.4. Built-in creative content

Not all elements of a mobile app are necessarily created by the developer. Many apps incorporate pre-existing content that may be protected by an IP right. Some examples of pre-existing content include:

- photographs;
- art for music albums, video games, books, television, and films;
- logos of products, businesses, and sports teams;
- songs and audio clips;
- reproductions of books or other text; and
- open-source code.

It is important to note that this content may itself be protected by IP. Knowing how to approach these types of content and how they can be used is important for app developers at the development stage.

2.5. Summary

Key points: IP in mobile applications

- From an IP perspective, a mobile application can be treated as a whole and in individual parts.
- Different IP rights apply to the different elements of the app, shown below.
 - 1. Built-in creative content
 - 2. Code and architecture, including functional aspects
 - 3. Esthetic aspects of graphical user interfaces
 - 4. Functional aspects of graphical user interfaces

3. CREATION: TOOLS TO BUILD MOBILE APPLICATIONS

Mobile application developers may want to make use of already existing components to build their app. This can involve works protected by IP, such as computer code, creative content, designs, trademarks or data. Some of these works are freely available though using them may change the proprietary nature of the application. For others, it is necessary to obtain permission or an exception. In the following sections, we provide tools on how to determine whether a work is IP-protected and who the right holder is, which acts are generally forbidden, what type of licenses for creative content and trademarks exist, and what the terms of use are for common application programming interfaces (APIs). We explain the tools, provide examples thereof and discuss the advantages and risks.

3.1. Determine whether a prior work is IP-protected and who the right holder is

When using prior work, an important first step is to determine whether it falls under IP protection or in the public domain and is hence no conditions attach to it being used. Works falling in the public domain do not require authorization to be used. If a work is protected by an IP right, the use of the work must either be authorized by the right holder or fall into a category of permitted acts (exceptions to the right). An authorization or license to incorporate IP-protected works into a mobile app can be obtained from the right holder.

There are different ways to check whether a work is IP-protected, but its status cannot always be ascertained.

3.1.1. Registries

Some types of IP are registered. These registries can be searched to ascertain if the work is protected by an IP right and who the right holder is. For some IP rights such as copyright, registration is optional. Developers who wish to use a prior work can conduct a search of the relevant register, but it is advisable to keep in mind that, for copyright works in particular, the fact that a work is not listed in a registry does not necessarily mean it is not protected by copyright. You will have to determine whether a creative work is copyright-protected, as explained in Section 3.1.2.

Other types of IP rights such as patents, design rights and registered trademarks are dependent on registration in a market and can be found in the relevant registry. When a work is listed in a registry, the right holder will also be indicated and can be approached for authorization if required.

Examples

Copyright registers:

- US Copyright Office
- <u>Copyright Office India</u>

Patent registers:

- European Patent Office, European Patent Register
- European Patent Office, Espacenet
- US Patent and Trademark Office Patent Register
- <u>China National Intellectual Property Administration</u>
- Intellectual Property India
- National Institute of Industrial Property (Brazil)
- <u>WIPO Patentscope</u>

Design registers:

- <u>eSearch Plus</u>, the European Union Intellectual Property Office (EUIPO) database of current registered Community designs
- <u>DesignView</u>, an aggregate of numerous national databases, including the US, China, India, and European Community
- National Institute of Industrial Property (Brazil)
- Intellectual Property India
- <u>WIPO Global Design Database</u>

Trademark registers:

- <u>USPTO Trademark Database</u>, a searchable database of trademarks registered in the US
- Intellectual Property India
- National Institute of Industrial Property (Brazil)
- <u>eSearch Plus</u>, a database of European Union Trade Marks
- <u>WIPO Global Brand Database</u>

3.1.2. Public domain works and ideas

Certain works, materials and ideas are considered free for anyone to use—these form what is known as the public domain. The rules that determine whether a work is IPprotected or in the public domain are set at the national level and therefore vary from one jurisdiction to another. We advise you seek legal assistance in the relevant market to find out what rules apply. However, some general guidelines can help assess whether 1) a work belongs to the category of works that can incur IP protection, 2) what the idea behind the work is, and 3) whether a work is still within the protection term.

If a work appears to fall within these general categories, it is advisable to undertake further enquiries to ascertain whether an IP right applies and who the owner is. If the work is not eligible for IP protection, or if the right in the work has expired, it falls in the public domain and outside the protection of IP laws. The <u>WIPO Scoping Study on</u> <u>Copyright and Related Rights and the Public Domain</u> presents a useful tool for determining public domain works.

Guidelines: public domain works

- **Copyright** generally protects original, creative works. It applies to text, software, designs, musical compositions, film or other creative works. Copyright protects only the expression of an idea (= the exact design) rather than the idea of a certain style (= simple, straight lines). Creative expressions are generally protected for at least 50 years after the death of the author or from the moment of publication.
- Patents are used to protect inventions; these are products or processes with a technical effect. In a mobile app, software code itself is not patentable; however, the inventions that implement software can be if they cause something to go beyond the code itself, and as long as the features are new and inventive compared to what is publicly known at the time. Only what is claimed in the patent application (= the description of the invention) and equivalent solutions are protected; abstract ideas (= of a software that scans documents) cannot be protected. Protection extends to a maximum of 20 years from the filling date.
- Design rights protect the appearance of a product, i.e. its ornamental or esthetic aspects. For mobile apps, this could be the esthetic elements of GUIs. Protection extends to the specific appearance, not to the abstract idea thereof. The duration of protection for a design varies significantly, between 10 and 25 years.
- **Trademarks** protect a name, logo, or trademarking used in relation to goods/services. Protection extends to the specific sign used in relation to the defined goods/services, not to the abstract idea thereof. The duration of protection is indefinite as long as a trademark is renewed and still fulfils the conditions for protection.

3.1.3. Collecting societies

Some copyright owners opt to designate a collecting society (also known as a collective management society) to manage their rights. These organizations handle collection, distribution and licensing among other tasks, and they are generally separate according to the types of work they handle—music, art, film, etc. If an app developer is seeking to use a work managed by a collecting society, they can request a license from them. Licensing existing musical and artistic works can be complex, and app developers may wish to seek specialized legal advice.

Examples

Collecting societies for music include:

- <u>Music Copyright Society of China</u>
- <u>Phonographic Digital Limited (PDL)</u> (India)
- PRS for Music (UK)
- <u>Global Music Rights</u> (US)
- <u>Société des auteurs, compositeurs et éditeurs de musique</u> (<u>SACEM</u>) (France)
- <u>Gesellschaft für musikalische Aufführungs- und mechanische</u> <u>Vervielfältigungsrechte (GEMA)</u> (Germany)

Collecting societies for images and artwork include:

- Artists Rights Society (ARS) (US)
- Design and Artists Copyrights Society (DACS) (UK)
- <u>VG Bild-Kunst</u> (Germany)

3.1.4. Advantages and risks

Advantages	Risks
 All registered rights are listed in	 Not all information needed to
public registries of the relevant	determine whether a work is IP-
countries and can be accessed to	protected is always readily
determine the right holders.	available.
 Ideas remain free to be used. Only	 Unregistered rights, such as
the expression of the particular	copyright, are not listed in a register
element of the app (interface,	and therefore more difficult to
design, logo) is protected.	ascertain.
 Approaching right holders upfront for	 Without legal advice, determining
authorization avoids liability for	whether a work comes under IP
possible infringement.	protection can be difficult.
 Collecting societies enable app developers to obtain (multi- territorial) licenses for the use of works whose right holders have signed up with a collecting society. 	

3.2. Exclusive versus permitted acts

If a work is protected by an IP right, the use of the work must be authorized by the IP holder if it does not fall into the category of permitted acts, commonly referred to as exceptions. Authorization is not needed if the use that mobile application developers want to make of a prior IP-protected work falls within these exceptions. In copyright, certain exceptions may only be available to certain rights and not to others. In this section, we present relevant exceptions that may apply to using software and graphical interfaces.

3.2.1. Prohibited and permitted acts in relation to copyright-protected creative content

Many apps incorporate content that is protected by copyright, such as artwork or images from film, television or books; music recordings or audio clips of copyright material; or reproductions of books or texts. Copyright owners have the exclusive right to copy, adapt, and distribute a work; if unauthorized, these acts infringe copyright. National copyright laws, however, also set out a series of circumstances in which copyright material may be used without authorization. Exceptions relevant for app developers using copyright-protected creative content may include the general categories of fair use or fair dealing, education and research, and library and archives. Most use of copyright material requires authorization from the right holder. For this

reason, it is advisable to be cautious when relying on an exception and to seek legal advice in the event of uncertainty.

3.2.1.1. Fair use and fair dealing

One of the main copyright exceptions in common law countries—such as the US, UK, India, and Canada—is a general category of fair use or fair dealing, intended to ensure that the rights of the copyright holder are balanced against the public interest. Fair use and fair dealing may permit use of copyright material for the purposes of quotation, commentary, criticism, parody, news reporting, and private study, among others. The conditions for fair use or fair dealing are determined at the national level, and include factors such as:

- the purpose of the use, and whether it is necessary;
- the nature of the copyright work being used;
- the quantity of the work used in relation to the work as a whole;
- whether the work has previously been published; and
- the effect of the use of the work on the market.

Mobile apps providing a news service may, for example, rely on this general exception to reproduce images or video footage. It is advisable to refer to the legal rules applicable in the relevant jurisdiction.

3.2.1.2. Education and research exceptions

There is a general copyright exception in most jurisdictions which allows for works to be copied for educational, non-commercial purposes. Applications that perform an educational function may be able to rely on this exception to use copyright-protected material, such as passages of text from books.

3.2.1.3. Library and archive exceptions

A common exception to the exclusive rights of copyright is for libraries, museums, and archives. It enables these institutions to make copies of copyright work in order to preserve the work and make it available to the public. It is important to note that, in some jurisdictions such as the US, this exception applies only to libraries, museums, and archives making copies of their works available within the library premises.

3.2.2. Prohibited and permitted acts in relation to software

Software is generally protected by copyright if the software developer put creative, original effort in its creation. The exact conditions depend on the rules of the country where the software is created, and the rights granted to copyright-protected software also depend on national rules. Generally, copyright grants exclusive rights to the software creator to reproduce, adapt, and distribute the work. It is therefore essential for a developer to avoid unauthorized use of proprietary code, including copying or

adapting and implementing code into their own app and offering it for downloading, as these fall under copyright's exclusive acts.

There are specific exceptions that apply to the copyright protection of software. In the EU, for instance, the rights and exceptions available for software are set out in the Software Directive and differ slightly from the rights and exceptions available for other creative works. It is therefore advisable to refer to the relevant national rules to determine the exact exceptions and their scope.

In some jurisdictions, decompiling object code (which involves creating copies of the code) may fall into the category of fair use if it is necessary in order to achieve interoperability between software programs. In the EU, while there is no general fair use or fair dealing exception, the Software Directive provides that software may also be decompiled if this is necessary to ensure it operates with another program or device, and only for that purpose.³

Computer-implemented software can also be eligible for patent protection if it is new, inventive, industrially applicable and not excluded from patent protection by local law. Since many countries explicitly exclude computer programs as such from patent protection, it is not possible to patent the code itself. However, inventions that are implemented by software can be patented. If successful, patent protection prevents others from making or using commercially, selling, offering for sale, or importing a patented invention without authorisation for up to 20 years. This protection extends to independent creations by third parties.

3.2.3. Prohibited and permitted acts in relation to GUIs

Graphical user interfaces can be protected with different IP rights including copyright, designs, and patents. Here, we set out the exclusive and permitted acts for GUIs in relation to these different rights below.

3.2.3.1. Copyright-protected aspects of GUIs

When a GUI is protected by copyright, the copyright owner has the exclusive right to copy, adapt, and distribute a work, unless an exception applies. Copyright applies to the esthetic elements of a GUI and not to its functional aspects (see Section 4.1.1.2). App developers should therefore be careful to avoid unauthorized copying of images, icons or animations that display distinctive creativity. The use of an envelope to represent email or communication would not contravene copyright, but a copy from another GUI of a distinctive image of an envelope may be an infringement.

If an app developer copies or adapts a copyright-protected icon or image, this will constitute infringement unless an exception applies. National copyright laws set out specific exceptions. The doctrines of fair dealing and fair use permit the use of

³ See Shemtov 2018, <u>https://www.wipo.int/export/sites/www/ip-</u> <u>development/en/agenda/pdf/ip_and_mobile_applications_study.pdf</u>

copyright material for the purposes of quotation, commentary, criticism, or parody, among others.

3.2.3.2. Design-right-protected aspects of GUIs

If a GUI is protected by a design right (see Section 4.4.1), the right holder has the exclusive right to prevent others from making, selling or importing a product incorporating a copy or a substantial copy of the design for commercial purposes without authorization. Design rights can apply to the interface as a whole, or to elements thereof, such as icons or animations. It is important for app developers to avoid copying these elements without authorization, even if they are implemented by different code. However, any features of a design that are dictated by technical function fall outside this protection and can be freely usedused (unless protected by another IP right), such as menu sequences or common and obvious choices for icons, such as a printer for "print" (as long as this is not a direct copy of the graphical representation).

Design protection commonly recognizes so-called "must-fit" and "must-match" exceptions. They are concerned with design features that enable one product to be functionally fitted or esthetically matched to another. These exceptions are not immediately relevant to GUIs.

3.2.3.3. Patent-right-protected aspects of GUIs

In exceptional cases, patents may protect some functional aspects of GUIs (see Section 4.2.2). Patent holders have the exclusive right to prevent others from making, using or selling the patented product or process, with some narrow exceptions for the purposes of research. It is advisable to seek authorization for bringing to market a new app that incorporates patented elements.

3.2.4. Advantages and risks

Reverse engineering is an exception

included in many national copyright

laws applying to software. It should,

however, be done cautiously, as

putting into practice the knowledge

gained may infringe other IP rights.

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Advantages Risks Determining whether an act comes If the use of an IP-protected work is • under the scope of protection or an not covered by exclusive rights or falls exception can be complex and under an exception, authorization by requires legal advice. the author is not required. Design and patent protection allow Many copyright exceptions are • right holders to prevent others from applicable to non-commercial uses using the design or invention. of prior copyright-protected works Copyright only protects against only. copying the creative work or design. • Fair use and fair dealing present Esthetic features of GUIs should not • exceptions that can be invoked for the copy original earlier interfaces. purpose of quotation, criticism. Commonly used interfaces can be parody or news reporting in relation to copied or adapted, as they are not copyright-protected content. protected by copyright protection.

• Functional aspects of code and GUIs exceptionally are protected by patent protection. In order to not risk infringing such rights, the assessment by an IP professional is recommended.

3.2.5. Summary

Guidelines: prohibited versus permitted acts

- Software and icons, graphics and animations if original can be protected under copyright against reproduction, adaptation and distribution to the public.
- The appearance of a product, such as color, shape, lines, contours and patterns of graphical interfaces can be protected, under design protection, against making, selling or importing articles bearing or embodying a copy, or substantially a copy, of the protected design if for commercial purposes.
- Functional aspects of GUIs can, in exceptional cases, be protected through a patent. If patented, permission must be obtained from the patent owner in order to implement the invention.
- If app developers want to use prior design or patent-protected elements or copy prior copyright-protected content available to the public, they will need permission to do so, unless they benefit from an exception.
- Exceptions are defined in national law.
- Exceptions relevant for the use of software are:
 - fair use or fair dealing for apps reporting on news or providing quotes,
 - reverse engineering,
 - education and research exceptions for apps providing educational content, and
 - library and archiving exceptions for apps fulfilling an archiving function.

3.3. Using built-in creative content

If a developer wants to use an element in the mobile app that is protected by an IP right, authorization by the right holder will be necessary unless the foreseen use does not conflict with a right or comes under an exception to the right. Distributors (app stores) routinely require evidence of rights to use the creative content incorporated into an app. Licenses are a common tool to seek such permission. A license is a binding agreement between the right holder (the licensor), which grants permission for the use of the IP-protected content to another party (the licensee) under certain conditions. Another tool to obtain authorization for use, e.g. of a software code, is through assignment. The difference between assignment and a license is that the former transfers ownership over the IP right, while a license only provides a permission to use it.

There are several tools available to obtain authorization for using IP-protected creative content. Here, we provide guidelines regarding the use of the following tools: open-source software, Creative Commons licenses, copyright licenses and assignment of IP. We also provide examples of these tools and discuss the advantages and risks.

3.3.1. Open-source software

Open-source and free software is available for developers to use, modify and distribute in their own creations. Open-source codes are valuable resources for app developers, who can use the available bits of code in order to introduce various features and functionalities, such as the display of in-app notifications and alerts, or conversion of text into clickable links. Open-source code is often hosted in online code repositories, such as the following:

- <u>GitHub</u>
- Launchpad
- Bitbucket

Using tried and tested sections of codes for such end may enable developers to save development time and boost efficiency. The fact that open-source or free software is freely available does not mean that it is not protected by IP. Rather, it means that it is made available under a particular type of license that may enable the user to access, copy and modify the relevant code. While open-source licenses allow others to use and modify the code and to distribute programs into which it is incorporated, that software is subject to a series of conditions, such as requiring attribution notices, disclaimers, and the inclusion of a copyright and permission notice. Depending on the open-source licence at issue, it may require the user to offer the resulting work, into which the open-source code was incorporated, to the public under the same terms as the underling open-source licence. For example, this may effectively mean that incorporating open-source code into one's work may compromise her ability to rely on the proprietary nature of copyright law and offer the resulting work while objecting to copying and modifications by third parties. This is sometimes referred to as the viral

effect of open-source code, whereby code released under certain type of licences (sometime referred to as strong copyleft licences) may 'contaminate' the entire resulting work and effectively compel the author of such work to forgo some of its exclusive rights (e.g. reproduction and adaptation). It is therefore essential for app developers to be aware of and ensure compliance with the license conditions that are connected to the use of open-source software. Developers should understand how using open-source software will impact their ability to license and sell their products.

There are many examples of licenses that meet the definitions of free and open source, and online repositories contain code made available under various licenses. Some of the most popular and widely used licenses include the following:

- Apache License 2.0 (Apache-2.0)
- <u>3-clause BSD license (BSD-3-Clause)</u>
- 2-clause BSD license (BSD-2-Clause)
- <u>European Union Public License (EUPL-1.2)</u>
- GNU General Public License (GPL)
- GNU Lesser General Public License (LGPL)
- <u>MIT license (MIT)</u>
- Mozilla Public License 2.0 (MPL-2.0)
- <u>Common Development and Distribution License 1.0 (CDDL-1.0)</u>

A more extensive list of open-source licenses can be found at the Open Source Initiative website.

As mentioned above, open-source licenses fall broadly into two main categories: copyleft and permissive. **Copyleft** licenses grant licensees the right to use, modify and distribute the IP-protected work, provided that any works derived therefrom are made available under the same license conditions. The GNU General Public License, for instance, is a widely used example of such a license.

Permissive licenses, on the other hand, may allow for code released under such license to be used, modified, distributed, and incorporated into other bits of code without having to make the resulting code freely available as in the case of code released under copyleft licenses, including in closed-source projects. The MIT License is a simple permissive license that requires licensees to include copyright and license notices but does not impose conditions under which the derived work needs to be made available. In a mobile app, these could easily be included in an "about", "information", or "IP" menu.

In conclusion, using open-source code may have a significant impact of a developer's ability to regulate actions of parties in the marketplace in relation to its own code. It is therefore imperative that mobile app businesses stay mindful of the origin of the code used by their developers and regulate such use. It may be the case that using code available under a certain type of licence could prove incompatible with the business model at issue and must therefore be avoided. alternatively, using code available under other type of licences may require additional steps such as inclusion of copyright notices, which must be adhered to. A failure to comply with the terms of the open-

source licence under which the code was made available may lead to the resulting work constituting copyright infringement in relation to the open-source code. In case of any doubt, it is advisable to consult a local copyright expert

It should be noted that obligations can depend on how the licensed code is incorporated into the codebase. For example, using a code snippet may trigger different obligations than calling an unmodified library.

Guidelines: open-source repositories

- Check open-source repositories to find out whether software useful for the development of the mobile app is available.
- Check the license and conditions under which the software is made available.
- Make copyright and license notices available in a section of the mobile app.
- Consider using programs such as the <u>OpenChain</u> compliance program of the Linux Foundation to manage different open-source licenses.

3.3.2. Copyright licenses

When right holders do not wish to make their creative content freely available to use, app developers need to secure permission to use the copyright-protected content through a proprietary license ("license-in"). App developers should negotiate with the right holder, or alternatively the relevant collecting society, the terms of use of the copyright-protected work for the purpose of the app developed by the app developer. Here we provide only an overview of the most important terms to consider.⁴

When negotiating a license with the right holder, it is useful to prepare well. This entails knowing the right holder, possibly by carrying out due diligence. For copyright material, obtaining royalties may be the main motivation of the right holder to grant licenses. But for negotiating the terms of the license, it is useful to know the interests of the right holder to a certain degree, their current licensing practice and whether they use standard licensing terms, etc.

⁴ For a more elaborate discussion, see "WIPO Handbook on Key contracts for mobile applications – a developer's perspective".

3.3.2.1. Licensing terms

We do not discuss general contractual terms here, such as warranties, choice of jurisdiction and law, term of the agreement and others. But regarding the most common elements of a license, it is advisable to prepare one's own preferences, together with a licensing professional. Creative works differ and right holders may have different preferences This can lead to different strategies, according to which negotiations can best be carried out. The following should be considered:

Guidelines: copyright licensing terms

- **Subject matter**: The license should clearly set out the work to be used in the app. An app developer should determine which exact creative content will be used in the app.
- **Scope**: The license should specify in which form and in which media (= an app) the app developer is allowed to use the creative work. App developers should consider future developments they may want to use the content for and should therefore aim at including all rights necessary for a foreseeable exploitation of their app. Typically, a copyright license includes the terms to:
 - use and reproduce the work;
 - modify and make derivative works;
 - distribute the work.
- **Territory**: Since licenses are granted per jurisdiction (country or region), the app developer needs to determine the markets in which they will launch the app. The license should cover these markets. The more markets that will be covered, the more costly the license is going to be.
- **Costs**: Copyright licenses usually require the licensee to pay royalties on a regular basis. The royalties depend on how much use is made of the licensed work. This is often the most important reason for a licensor to accept licensing of its copyright-protected product. For collecting societies, the terms covering calculation of royalties will often be already predetermined and non-negotiable. For individual right holders, the terms will have to be negotiated.
- **Timing**: The start of the license should be aligned with the release of the app.
- **Consent procedure**: Establish a procedure through which the licensee can ask for permission for activities not regulated by the licensing agreement.

3.3.2.2. Examples of licensing provisions

Common clauses for licensing provisions are included in the following guides:

- UK Intellectual Property Office, Licensing Intellectual Property
- <u>European IPR Helpdesk, Fact Sheet: Commercialising Intellectual Property:</u> <u>Licence Agreements</u>
- Government of Canada, Sample Licensing Clauses
- <u>WIPO Handbook on Key contracts for mobile applications a developer's</u> perspective

3.3.3. Creative Commons licenses

For copyright-protected works, a special form of license is available, the Creative Commons (CC) license. Works made available under a CC license can be freely distributed. Therefore, when app developers are looking for designs, music or other creative content, it is worth checking relevant platforms where works are made available under this particular licensing scheme. Even though use and distribution of the work are free of charge, users have to abide by the conditions specified in the license.

3.3.3.1. Finding Creative Common works

The most commonly way to find CC works is to search platforms where such content is available. The following platforms are listed by CC as the ones they work together with:

- <u>Flickr</u>
- Bandcamp
- Wikipedia
- YouTube
- Sketchfab
- InternetArchive
- <u>Vimeo</u>
- WikimediaCommons
- Freemusicarchive
- Skills Commons
- Europeana
- Tribe of Noise
- Jamendo
- <u>Plos</u>
- MITOpenCourseWare

<u>CC Search</u> is another tool to search for works that use CC licenses.

3.3.3.2. Terms of Creative Commons licenses

When using works available under CC, app developers should distinguish between the four main types of Creative Commons licenses, which impose different sets of conditions on users. These conditions are typically indicated with the following signs when accessing the licensed work:



Conditions



Attribution: Licensees must give appropriate credit or attribution to the creator. The work may be copied, distributed, displayed, performed, used for commercial purposes and even used to derive other works from it, as long as the creator is given credit.





Share-Alike: Licensees may distribute work derived from licensed content, but they must distribute the derived work under licensing terms identical to those posed on the original work.

Non-commercial: Licensees may copy, distribute, display and derive other works as long as it is done for non-commercial purposes only. Non-commercial works are not intended for or directed toward commercial use monetary compensation. or Developers should, therefore, not use works Non-Commercial Creative licensed under a Commons license if they intend create a paid app, use in-app purchasing, or derive revenue from advertising. CC has a guide to help determine whether use of content is commercial or noncommercial.



No Derivative: Licensees may copy, distribute and display verbatim copies of the work, but they cannot make derivative works based on it.

⁵ Creative Commons, About CC Licensing, available at <u>https://creativecommons.org/about/cclicenses/</u> (22 December 2020).

Guidelines: Creative Commons

- Creative Commons are available for copyright protected, creative material.
- Check platforms containing CC licensed works to see whether creative content useful for the development of the app is available.
- Check which exact conditions the CC license sets out.
- Make sure to comply with the terms; if you wish to use the content in other ways, permission needs to be sought from the right holder.
- Creator attribution and the licensing terms for the derived work can be provided by disclosing the Creative Commons licensed material used and the licensing terms, either in the end-user licensing agreement or in information menus.

Creative Commons provides useful information on the different licensing conditions.

3.3.4. Assignment of software

An assignment is a transfer of ownership of IP. If IP is assigned, the assignee is free to reproduce, alter and distribute the work however they wish. In contrast, a license merely grants permission to use certain IP in a specific context, while ownership stays with the licensor. For app developers, assignment may be a favorable option when working with third parties who create code for the app. Third-party developers when creating the code will own the IP in it. In this situation, it is advisable for the app developer to seek assignment of the IP in the code, so that they have full ownership and control. It is important to note that the third-party developers may prefer to retain ownership of IP and instead license the code, so this may be a subject for negotiation.⁶ If the third party creating the code incorporates content from other IP owners whether licensed or open source, the rights to use the content should also be made clear. For example, the app developer should understand whether additional rights are needed to implement the underlying code.

⁶ "The WIPO Handbook on Key contracts for mobile applications – a developer's perspective" provides further guidance in this regard.

3.3.5. Advantages and risks

Advantages	Risks
Open-source repositories and Creative Commons licenses are free of charge and therefore useful starting points for app developers.	• Licenses that are free of charge, however, demand licensees to comply with its terms. Sometimes, this may change the proprietary nature of the code or require certain actions by the developer.
Licenses can be less expensive and provide more freedom to the parties as compared to transfer of ownership. Knowing both parties' interests can lead to win-win agreements.	• Obtaining a license for creative content is dependent on the licensor's willingness to agree on economically viable terms for licensing. In some cases, negotiations may not be feasible. The app developer should carefully assess as to whether the obligations fit with an app developer's situation.

- Assignment of IP rights in software enables the app developer to use them for various purposes that may not be anticipated at the time the agreement is drafted.
- App developers may not be certain on how the application will ultimately be used. Ensuring a broad-enough license, both materially and territorially, can be challenging.

3.3.6. Summary

Key points: using built-in content

- When considering using works of third parties, app developers need to verify:
 - whether these works are protected by an IP right in the relevant territory or whether they fall in the public domain, and
 - who the right holder is.
- If the work is IP-protected, the planned use should be analyzed to understand whether permission to use the work is required.
- If the use falls under the rights, seeking permission is inevitable, as an app developer otherwise risks infringing IP rights.
- Permission to use is commonly obtained by a licensing agreement. In the case of software, seeking the assignment of IP rights may be preferable.
- Licensing schemes differ regarding costs, terms of use, and territorial and material scope. For negotiating such terms, legal advice should be sought to set out a strategy that fits the preferences of the app developer, the IP-protected work and the right holder's preferences.

3.3.7. Resources

- <u>UK Intellectual Property Office, Licensing Intellectual Property</u>
- European IPR Helpdesk, Your Guide to IP and Contracts
- <u>European IPR Helpdesk, Fact Sheet: Commercialising Intellectual Property:</u>
 <u>Licence Agreements</u>
- <u>WIPO Successful Technology Licensing</u>
- <u>WIPO Handbook on Key Contracts for Mobile Applications a developer's</u> perspective
- WIPO Distance Learning Course on "<u>Software licensing including open source</u> (<u>DL-511</u>)"

3.4. Using a trademark within the mobile application

Different types of mobile applications may benefit from using the trademark of a movie, celebrity, sports, music or a company in order to enhance the value of the app. The decision to use a trademark is a strategic one and depends on various factors – the relevance and importance of these factors needs to be assessed carefully.

3.4.1. Trademark licenses

The right to use a certain trademark is conferred through trademark licenses. Trademark licenses are contracts between the trademark owner (licensor) and the app developer (licensee) to use the trademark under the conditions specified. Here, we discuss elements typically included in trademark licenses and which should be checked to see whether they serve the app developer's needs. When negotiating a trademark license, it is advisable to seek advice from a licensing professional.

A trademark license will only be necessary if the app developer wants to use the trademark for commercial purposes. If the mobile app is, for example, used for archiving, educational or research purposes, and if there is no economic benefit generated by the app, a non-commercial license may be sufficient and more cost-effective. An app that is available for free may lack commercial purpose, and therefore the use of a trademark in relation to the app may not interfere with trademark rights. Important to note is that free-of-charge apps fall under commercial purposes if money is made in a different from, e.g. by generating promotional value for another commercial product, advertising income or having an impact on the market conditions for competitors. In other words, non-commercial licenses are only viable alternatives to a trademark license if no income is generated in any way.

Guidelines: trademark licensing terms

- **Subject-matter**: The license should specify the form and style in which the trademark is registered, or the form, color, design, style and manner approved by the right holder
- **Scope**: The license should specify the goods and services (i.e., telecommunication services but also the area of goods and services the app is useful for) the app developer is allowed to use the trademark for the purposes of marketing and offering the app on the market. App developers should consider future developments they may want to use the trademark for. Typically, a trademark license includes the following:
 - right to use and apply the trademark on and in relation to goods and services,
 - and this in connection with the use, marketing, distribution, sale or disposal of the mobile application.
- **Costs**: The license will set out the royalty fee payable per time period. Trademark royalty rates are usually a percentage of the revenue generated by the trademark.
- **Territory**: Licenses are defined per jurisdiction (country or region); a worldwide license makes it possible to release the app with trademark content in any country but will naturally be more costly.
- Exclusivity: In determining the value of using a trademark, the app developer may consider which parties can use it. A sole license by which only the trademark owner and the app developer are allowed to use the trademark is useful when the trademark provides a competitive advantage over competitors. In most cases, however, other licensees will also be allowed to use the trademark. In this case, the app developers should investigate who the other licensees are and what their license covers. If an important competitor is also a licensee of the same trademark, this may lead to conflicts in the marketplace. Obviously, an exclusive license will be more expensive than a sole license.
- Quality control: The trademark holder will want to guarantee consistent use of the trademark under the specified terms. Certain rights of inspection are likely to be included in the license.
- **Timing**: The start of the license should be aligned with the release of the app.
- **Marketing**: It is advisable to also agree in the license on how the trademark owner will promote the licensed app.
- **Timing of the approval process**: The licensee should agree with the licensor on which content needs to be approved by the licensor and how long approval will take. This is important to plan the release of the app and new features later on.

3.4.2. Examples

Templates:

- International license agreement
- Sample clauses for trademark licenses, including on use for software
- WIPO, IP Panorama, <u>Trademark Licensing Learning Points</u>

An example grant clause for a non-exclusive license can look like this:

"A non-exclusive license grants to the licensee the right to use a trademark according to the grant. The licensor may continue to use the trademark itself, as well as grant other licenses."

3.4.3. Advantages and risks

Advantages	Risks
• Using a well-known trademark can enhance the value of an app (the credibility of the trademark is transferred to the app) and entice more consumers to use the app (search results of the trademark in the app store will list the app).	• The benefit of using a prior trademark must be assessed against the terms and costs of the license and which other parties (competitors) use the same trademark for similar services.

- Trademark owners may also promote the app on their marketing outlets.
 As a licensee of an important brand, the app developer most likely will
- When the app is merely for noncommercial use, a non-commercial license at no or low costs can suffice.
- As a licensee of an important brand, the app developer most likely will have to accept the terms of licensing established by the owner.

3.4.4. Summary

Key points: trademark licenses

- When considering whether to use a (well-known) mark for an app, app developers should weigh the advantages, costs and conditions.
- If using someone else's trademark is desired, an app should seek the appropriate rights.
- Permission to use is commonly obtained by a trademark license. In the case of non-commercial use of the trademark (i.e. for non-profit apps), a no-cost or low-cost license may be available. However, these licenses may still entail obligations for the app developer.
- Licensing schemes differ regarding costs, terms of use, and territorial and material scope. For negotiating such terms, legal advice should be sought to set out a strategy that fits the preferences of the app developer, the IP-protected work and the right holder.
- Keep appropriate documentation of the licensing arrangements, as Apple and Google app stores require authorization to use a trademark before making the app available.
3.5. Using established services and data via an application programming interface

When mobile app developers would like to make use of certain services, such as music, pictures, payment services or social media feeds, they can do so via application programming interfaces (APIs), for example from Twitter, Spotify or PayPal. These are particularly interesting when the app is designed to offer access to such data like music or pictures. In these sections, we present the most common terms of use, offer some examples of APIs from major online platforms, and discuss advantages and risks.

3.5.1. API terms of use

When seeking permission to use a company's API, an agreement is needed between the online platform and the developer of the mobile app; this may be established by agreeing to the terms of use available on the API website. The difference between terms of use and a licensing contract is that, for the terms of use, there is usually no ability to negotiate. In fact, the terms will have to be accepted as is. Here, we present an overview of important elements of terms of use.⁷

⁷ See the "WIPO Handbook on Key contracts for mobile applications – a developer's perspective" for further discussion.

Guidelines: API terms of use

- License to use data: The terms of use specify to what data a license of use is granted. For APIs, it is common for the license to be non-exclusive (so others can also obtain a license) and that it cannot be transferred to third parties or be sub-licensed. On the other hand, APIs often set out that the app developer grants the API company a royalty-free worldwide license to use the developer's application for testing, review or other related purposes
- Restrictions to use: The type of services that a license is granted for may be restricted. For example, services that compete with the company's business model (commercial uses) or in a way that creates a direct association with the right holder can be restricted. Spotify and Twitter, for example, also restrict developers from modifying, editing, reverse-engineering or extracting, etc., the source code from the Spotify or Twitter Platform.
- **Costs**: The amount companies charge varies, depending on the data set that they offer.
- Use of platform's trademark: The platforms often require mobile app producers to refer to their trademark as the source of the content and therefore grant a license to use the mark; in addition, the right holder of the content also needs to be attributed.
- **Privacy policy**: Some terms of use require adoption of specific standards of privacy rules; this may be particularly relevant for app producers outside the European Union who want to use the API of a company located in the EU, since companies there have to comply with stringent data protection rules.
- **Revoking access**: The terms will specify the conditions under which access to the APIs can be revoked and what steps will be taken.

3.5.2. Examples

- Soundcloud API terms of use
- Spotify API terms of use
- Twitter API terms of use
- PayPal's API terms of use

3.5.3. Advantages and risks

Advantages • The terms of use are often non-• Making use of the functions of other negotiable. The ability to comply with applications or services can reduce costs of development and make it all of them is important so that the platform does not revoke access. possible to access the market faster. • Acquiring a license from the platform • There is a risk of becoming overly to use its data can be easier than dependent on the platform. Its acquiring from the individual right financial stability, cybersecurity and holders separately. willingness to share access to its APIs negatively can impact the performance of the app.

• An app's value can increase by including already established features of interest to consumers.

4. PROTECTION: TOOLS TO PROTECT DIFFERENT PARTS OF MOBILE APPLICATIONS

Mobile application developers should protect the value of the parts of their mobile application. They can do so through various IP tools. Various IP tools protect different parts of mobile applications. Protection arises and applies at different points of development and publication of a mobile app. The following sections deal with the IP tools copyright, patents, trademarks and unfair competition, design rights and trade secrets. In the following sections we explain each tool, present the conditions under which the tool can be used, provide examples, and present advantages and risks connected to the tool.

4.1. Copyright

Copyright protects original, creative works. This can be the mobile application as a whole but also parts of mobile applications, including code, architecture and esthetics elements of GUIs. This section suggests under which circumstances these parts of mobile applications may be protected through copyright.

Important to note is that the law of copyright is determined at the national level and therefore varies among jurisdictions. It is therefore advisable that legal advice from a national copyright lawyer be sought in order to determine whether the particular work at issue qualifies for protection, and what the exact scope of protection is. What is common for all jurisdictions is that no registration is required for a work to be protected under copyright law. Protection is temporary, with a minimum protection of 50 years after the death of the author.

4.1.1. Copyright in mobile applications

Under copyright protection, a mobile application can be protected as a whole. The entire multimedia product as such incurs protection under copyright. But it may also be that only individual elements are copied by third parties. In that situation, it is important to identify whether that particular element is also protected in itself by copyright. Under certain circumstances, the types of rights and exceptions available may vary as to whether the individual element is at issue, or the entire product.

4.1.1.1. Code and architecture of computer programs

Copyright protects software code, both the machine-readable version (object code) as well as the source code. This means that, from the moment of creation, software code can be protected against unauthorized reproduction, adaptation and distribution, among other activities. It is important to note that copyright protects code only in the precise way it is expressed. In other words, copyright protects software code against unauthorized exact copies and adaptations, but it does not prevent someone from writing code with the same effect.

Code that incorporates code licensed from someone else, such as under an opensource license, will not be copyright-protected as a whole. Copyright will apply only to the parts of the software code that were developed by the mobile app developer themselves, as an original work. Practically, however, the conditions on the associated licenses may mean there are no meaningful rights in the code

4.1.1.2. Esthetic aspects of GUIs

Esthetic elements of GUIs may be eligible for copyright protection, so long as they demonstrate originality and are not designed solely for their technical function. Distinctive and original artwork incorporated into a GUI will generally be copyright-protected. The position taken by European courts is that aspects of a GUI which have been created solely to achieve a technical function cannot express the required originality and are therefore excluded from copyright's scope. This position has also been adopted in the US, where the animation of icons—the opening, closing, and overlapping of windows—in Apple's Mac operating system was found to be essentially functional and therefore not protected by copyright. This means that because of the inherent functional elements of GUIs, in most cases copyright offers a fairly thin protection for GUIs.

Copyright protection for GUIs does not usually extend to the more general "look and feel" of the interface. The requirement of originality means that the various components of GUIs usually must show some kind of artistic embellishment. Icons, graphics, and animations can be protected as pictorial or graphic copyright works. It can, however, be difficult to show that these are original, as they are often based on generic designs that are familiar to users. Keeping records of the design process can be helpful in demonstrating non-functional considerations.

4.1.2. Copyright tools

Copyright is an automatic right, so registration and other formalities are not necessary for a work to be protected. But when making use of copyright, it may nevertheless be useful to register copyright (where possible), to specify in contracts who the owner of the copyright in a work is and to keep detailed records.

4.1.2.1. Registration

Registration may be useful if it is amenable that third parties may make unauthorized use of (parts of) the mobile applications. Even though it does not necessarily provide conclusive proof of copyright ownership, it is an important indication thereof. In addition, in some jurisdictions, notably the US, registration is considered as a proof of ownership, which otherwise can be difficult to prove.

Examples

National public copyright registries that record information about the work and its author/s include:

- The <u>U.S. Copyright Office</u>, where copyright works can be registered by completing an electronic or paper form, submitting a copy of the work, and paying a fee (US\$45-65 for electronic submissions and US\$125 for paper submissions).
- The <u>Copyright Protection Center of China</u>, where software and other copyright works can be registered. This requires the completion of an online form, submission of paper form and copy of the work, and payment of a fee (generally approximately 300 yuan for computer software). The China IPR SME Helpdesk has an English-language <u>guide</u> for registering copyright in China.
- The <u>Copyright Office</u> (India) accepts online and postal applications for copyright registration. The cost of registering a literary or artistic work, including software, is 2,000 rupees.

In addition to public registries, there are also many private companies that run copyright registries. While these private registration systems have not yet been tested by the courts, the time-stamped registration they provide may offer an alternative to proving authorship of a work when a public registry is not available. Examples are as follows.

- Safe Creative
- <u>MYOWS</u>
- Patamu
- <u>Copyright Registration Service</u>

4.1.2.2. Copyright notice

Another tool to increase respect for copyright protection is to use a copyright notice. Copyright notices are not a pre-requisite for protection but can serve as notice that a code is a copyright work and should be treated accordingly. A copyright notice can consist of:

- 1. the word "Copyright" or © copyright symbol;
- 2. the year of creation; and
- 3. the name of the copyright owner.

Copyright notice can be included in the application itself, in read-me files, and in a menu section such as "about" or "information". It could also be included in the code itself.

Example

• Google's guidance to its employees on <u>Copyright Notice Usage</u> suggests the optional inclusion of a copyright notice as a single line in source code files.

4.1.2.3. Record keeping

Systematic record keeping of the process of creating the work and decisions taken in the course of development is a useful and simple way to document the work and its date of creation. For software code, diligent record keeping could involve keeping copies of each version and keeping a log of any changes. For GUIs, this could include alternate versions considered and the reasoning behind decision-making in the design process. When dated and countersigned by a witness, such documents can prove useful in later disputes around authorship, creative choices, date of creation and other matters.

Examples

- Mobile app developers can send an email to themselves, with a copy of the work attached.
- Electronic lab notebooks are software programs that are designed to document research and could be used to capture the process of developing a mobile app.

4.1.2.4. Digital rights management and technological protection measures

Additional tools for protecting copyright in mobile applications include technical protection measures and digital rights management provisions. These tools restrict access to and use of copyright-protected works. Some examples of technical protection measures:

- Encryption
- Registration keys
- Digital watermarks
- Authentication handshakes
- Code signing
- Code obfuscation

For example, they can be used to prevent users reverse engineering an object code to create a simulated source code. These measures make it possible to control access to copyright-protected works and can help enforce one's copyright. Several jurisdictions, including the US, India, Brazil, China and the EU, have incorporated the circumvention of technological protection mechanisms as grounds of infringement in itself.

4.1.3. Advantages and risks

tools to increase enforcement of

copyright protection.

	Advantages		Risks
•	Copyright protection exists from the moment of creation if the creation is original. Since registration is not required, it is simple and low-cost.	•	For GUIs in mobile apps, copyright offers rather thin protection as it does not cover functional aspects of GUIs.
•	Software can be protected rather easily against reproduction, adaptation and distribution.	•	Enforcement of copyright can pose difficulties of evidence, costs and delays in launching the app.
•	Registration, record keeping, copyright notices and technological protection measures offer valuable		

4.1.4. Summary

Key points: copyright protection

- Copyright protection applies to any creative work, such as software, designs, images or sounds, that constitutes an author's own work.
- National copyright laws differ from one country to another; applying copyright law to mobile applications will often require legal advice from a professional of that country.
- Generally, copyright protection will be most useful for software incorporated in the mobile application; copyright protection for esthetic elements of GUIs exists but is rather thin.
- Acquiring copyright protection is automatic when the work is created; registration, on the other hand, is a tool to prove ownership of copyright works.
- Other tools such as copyright notice and contracts can be valuable for enforcing one's copyright and managing the contributions of employees and contractors.
- Record keeping can be particularly valuable in the development of GUIs, by documenting choices made for particular designs, in particular to differentiate between esthetic and functional elements.

4.2. Patents

Patents can be used to protect the technical aspects of a mobile app, including how it works (the software) and functional elements of GUIs. To qualify for a patent, an invention must be:

- 1. new;
- 2. inventive (or non-obvious);
- 3. industrially applicable; and
- 4. not be excluded from patent protection by local law

This section provides a guide for mobile app developers in determining under what conditions and for which parts of a mobile app the patent tool is available. We indicate the benefits and costs and outline registration procedures.

4.2.1. Patent basics

Patents allow their owner to prevent others from making, commercially using, selling, offering for sale, or importing the invention without authorization. Generally lasting up

to 20 years, patent rights can provide a strong from of protection, including against independent creation of the same or equivalent process or product by a third party. Compared to other IP rights, obtaining a patent tends to be a longer and more costly procedure. To navigate the process, many inventors seek support from a patent professional (see Section 4.2.5).

The availability of patent protection for mobile apps can be limited due to the generally high bar set for inventiveness and differences in eligibility by jurisdiction. A unique mobile app may not be "new and inventive" in the patent sense. Among other things, to qualify for patent protection, it would have to be sufficiently different so that another developer would not easily put together the app's elements. If patent protection is possible, the value of the potential asset makes patenting an important consideration in the valorisation strategy.

4.2.2. Patents in mobile applications

4.2.2.1. Code and architecture of software

While many countries explicitly exclude "computer programs as such" from patent protection, it may still be possible to get patent protection for an app. As a practical matter, it may be possible to patent inventions implemented by software but not the code itself. Software related inventions that cause something to go beyond the code itself, may qualify for protection. For example, software that compresses video or restores distorted digital image files, compresses or encrypts data have been found by the European Patent Office (EPO) to be eligible.⁸ Due to this high threshold of getting a patent for software, many companies rely on copyright to protect object code and trade secrets to protect source code.

4.2.2.2. Functional elements of GUIs

The functional aspects of a GUI may qualify for patent protection.⁹ Patents can protect technical aspects of an application's GUI, but not aesthetics such as colours and shapes of elements on the display. For example, Apple Inc. received a patent for its slide-to-unlock feature.¹⁰ Such functional elements often relate to the user experience. For example, it may be possible to obtain patent protection for a method where a user input causes something to happen on the device. Generally speaking, this will be possible only in exceptional cases. The current position of the European Patent Office (EPO), for example, indicates that aspects of GUIs which lower the user's cognitive burden, are not likely to be patentable, as this is not considered a technical effect.¹¹

⁸ EPO Guidelines for Examination Part G – Patentability, para. 3.6.1.

⁹ In this context, we refer to utility patents. For an explanation of design patents, see section Erreur ! S ource du renvoi introuvable.

¹⁰ US 7, 657, 849

¹¹ EPO Case Law of the Board of Appeals, Patentability, para. 9.1.6 a).

4.2.3. Patent tools

To obtain a patent, an inventor must apply to a local or regional patent office. Patents are only valid in the markets where they are secured. If protection is sought for multiple territories, patents rights must be obtained in each of these territories. To better understand the likelihood of obtaining a patent in a market, app developers may want to carry out a prior art search. Patent professionals can help inventors navigate the process in each relevant jurisdiction.

4.2.3.1. Registration

As Patent protection is not automatic. An inventor must apply for a patent with the relevant national, regional or international patent office. The right moment to apply for a patent is as soon as the invention is finalized. Only new inventions can receive patent protection. It is therefore important that the invention has not yet been disclosed to third parties, unless such disclosure took place subject to a duty of confidentiality. If the invention has been discussed with others in a way that allows them to make the invention themselves, the invention will not be new and a patent will not be granted.

Determining in which markets patent protection would be beneficial is crucial to choosing the relevant application route. Some major national patent offices:

- United States Patent and Trademark Office
- <u>China National Intellectual Property Administration</u>
- Brazilian Patent and Trademark Office
- Indian Patent Office
- Japan Patent Office
- <u>Korean Intellectual Property Office</u>

When seeking protection in the markets of a particular region, it may be strategic or cost effective to file an application through a regional office. Determining the costs and benefits of patent protection in a particular country or region is addressed in section 4.2.5. Applying to a regional patent organization can allow applicants to obtain protection in one or more countries at the same time. In some regional organizations, a single patent is granted within a region. In others, the examination of a patent is done by a single organization and rights can be secured in one or more of the regional Members.

Some regional organizations with which patents can be registered:

- African Intellectual Property Organization (OAPI)
- African Regional Industrial Property Organization (ARIPO)
- Eurasian Patent Organization (EAPO)
- European Patent Office (EPO)
- Patent Office of the Cooperation Council for the Arab States of the Gulf (GCC)

When mobile app developers wish to seek protection in multiple jurisdictions, the Patent Cooperation Treaty (PCT) allows applications to be filed simultaneously through one application in up to 153 Contracting States. In addition to a more streamlined process, the PCT gives applicants additional 18 months to decide where to seek patent protection. Applying for protection through the PCT is possible when at least one inventor or applicant is a citizen or resident of a State that has <u>signed the treaty</u>, or if the business has a commercial presence in one of those States.

A PCT application can be made through the <u>WIPO International Bureau</u>. Alternatively, a patent filed in a national or regional office may also provide the basis for an international application through the PCT. Once the international application has been lodged, assessed and published in line with the PCT, usually, and within 30 months from the date of the initial PCT application, the applicant can determine which national or regional patent office to address for granting a patent right.

4.2.3.2. Prior art search

To qualify for patent protection, an invention must be new and inventive. App developers are probably already aware of similar applications and believe their application provides something unique to the market. However, a patent search may uncover that others have tried similar approaches. If a patent already describes the same or similar aspects to their application, it is unlikely that they will be able to get a patent.

Before taking steps to apply for a patent, it can be useful to conduct what is known as a prior art search. This entails searching patent databases and literature, as well as surveying the market to determine whether products, processes or methods similar to the claimed invention are already available anywhere in the world. Several patent offices offer online access to patent databases, in which applicants can search patent applications and granted patents. Some major ones are listed below:

- <u>Patentscope</u> is a patent search database administered by WIPO.
- <u>Espacenet</u> is the patent search database of the European Patent Office.
- InPass is the patent search database of India.
- The US Patent and Trademark Office (USPTO) has a searchable <u>Patent</u> <u>Database</u>, and a <u>Patent Application Database</u>. It also provides a <u>guide</u> to conducting prior art searches.

National IP offices may also provide a patent search service for a fee. While it is useful to carry out a first search in the patent databases of major markets by oneself, it is advisable to seek professional advice for carrying out a prior art search before filing a patent application.

4.2.3.3. The Application

Drafting a patent application is a technical exercise that can benefit from the help of a patent professional who understands how mobile apps work and the applicable patent law. In a number of markets, engaging a local patent professional may be required to process the patent application or correspond with the patent office. A patent application is made up of multiple parts, including:

- A request to grant a patent including the date of filing, the priority date (i.e. the date of filing in the first market), and details of the inventor.
- A detailed description and drawings of the invention.
- The claims, which establish the invention that a patent owner has control over;
- An abstract which provides a summary of the invention.

4.2.3.4. Procedure to registration

Once an application is filed, the application is examined by the relevant authority. The length of the application process and what is reviewed can vary. In some jurisdictions, only the formal aspects of the application are reviewed. In others, examiners scrutinize the substantive aspects of an application to determine if it complies with local law. Generally, a national patent office follows six steps:

- 1. Examination to ensure that all formal requirements have been complied with, such as completed forms and adequate documentation submitted, translated as required and necessary fees paid.
- 2. A number of offices conduct a substantive examination to determine whether the application meets the requirements for patentability, in particular patentable subject matter, novelty, inventive step and industrial application. A patent office will compare existing patents, patent applications, and literature to assess novelty and inventive step.
- 3. Communication to the applicant of the result of the examination.
- 4. At this point, the applicant and/or their representatives will generally have the opportunity to respond to any objections by the patent examiner.
- 5. If successful, the patent will be granted and published in the official publication. Once granted, patent protection is effective as of the filing date of the patent application.
- 6. In a number of jurisdictions, third parties can oppose a granted patent for a brief period of time. If successful, this can result in the patent's revocation.

4.2.4. Examples and resources

General guides:

WIPO, Inventing the Future: An Introduction to Patents for Small and Medium-sized Enterprises

For further detail on registration procedures, please see:

EPO, <u>Overview of the Patent Grant Process</u> USPTO, <u>Nonprovisional (Utility) Patent Application Filing Guide</u> WIPO, <u>PCT Applicant's Guide</u>, <u>PCT FAQs</u>

4.2.5. Advantages and risks

Determining whether patent protection is an adequate and appropriate tool for a technical invention in the mobile app depends on many factors that need to be weighed against one another.

Advantages	Risks
• Patents are strong IP rights. Including them in the IP strategy to protect mobile apps is clearly beneficial in terms of scope of protection.	• Patent protection of software and functional elements of GUIs tends to be more difficult to secure.
• A prior art search will generate important information about the likelihood that patent protection will be granted.	• The process of obtaining a patent takes longer and usually costs more as compared to other IP rights. In addition to filing related costs, costs are also incurred to maintain protection through yearly or semi- annual renewal fees. These costs need to be weighed against the benefits of patent protection for a particular inventive technical feature of the mobile app
• Choosing key markets for patent protection is important; such markets are where risks of making or using the invention are significant and where enforcement of patents is feasible.	• The invention will only be protected in those markets where protection is sought. Through the registration process, the invention will become public. Others can then use the information described in a patent without the permission of the right holder in markets where no patent

protection has been obtained.

4.2.6. Summary

Key Points: Patent Protection

- Patent protection allows their owner to prevent others from making, using, selling, offering for sale, or importing an invention for up to 20 years. To qualify for a patent, the invention must be new, inventive and industrial applicable. It also cannot be subject to any exclusions from patentability by local law. Patents therefore provide a strategically valuable tool that, however, may not always be available for mobile applications.
- National and regional patent laws differ from one country or region to another. The support of a local patent professional can be critical to navigate the system.
- Functional elements of GUIs that relate to the user experience may qualify for protection if they can be considered inventive.
- Costs of applying for a patent and renewal fees are substantial.
- In determining whether patent protection is an adequate and appropriate tool for a technical invention in the mobile app, the app developer should balance the strategic value of rights with the costs.
- A prior search of already existing patent (applications) and literature worldwide can help provide an indication of whether something may be patentable.
- Patents only provide protection in the jurisdiction where the patent has been registered. An invention may be used without the owner's permission in any market where it is not protected. When choosing key markets for patent protection, app developers should consider whether to apply in each market separately, in one region or internationally in order to secure several key markets.

4.3. Trademark and unfair competition protection

Business insignia can be protected as trademarks if they are used in relation with a product or service and if they indicate origin. Mobile applications may incorporate several features, such as logos, designs and color combinations that can be protected in relation to the service provided through the app. In this section, we first explain some basics about trademark protection and then consider the availability of trademarks and unfair competition protection for specific types of signs, namely color combinations, esthetic and functional aspects of GUIs, and the overall appearance of an app. We then present the most relevant tools, which are registration, the procedural steps, required information, how to avoid non-use, and the advantages and risks connected to trademark and unfair competition protection.

4.3.1. Trademark basics

In most markets, both registered and unregistered trademarks are available, with the scope of protection for unregistered rights being more limited compared to registered rights. This toolbox focuses on the protection conferred by registered trademarks. Protection of a sign as a trademark is useful when that sign is distinctive and hence will communicate certain characteristics of the product to the consumer. Protection can be indefinite, as long as the sign indicates the origin of the products or services and registration is renewed. That is not the case when signs are considered descriptive or generic.

Protection is linked to the use of the trademark in connection with particular categories of goods and services. For registered marks, these need to be specified at registration. In the case of mobile applications, three categories of goods and services are relevant. First, if the app is downloadable, it falls under Class 9 for software. Second, if the app (also) provides a service, Class 42 for software as a service will (also) be relevant. Third, and in addition to the previous, if the app will do something for consumers, such as offering entertainment or education (Class 41), banking (Class 36) or telecommunication services (Class 38), ordering food (43) or anything else. Since this is what in the marketplace will matter, it is advisable to also register protection in relation to such services.

Some trademark regimes such as China, Japan, Russia and the EU operate a "firstto-file" system. This means that it is not required that the sign to be registered have already been in use. The first to file a trademark registration receives protection, even if another party can show prior use. Other trademark systems, such as those in the US, Canada or India operate on the "first-to-use" principle basis, in which trademark rights are based on adoption and use rather than on registration. Nevertheless, in such countries, registration is also highly desirable as it strengthens the proprietor's usebased rights.

Unfair competition rules can offer, under certain conditions, protection for parts of mobile apps that otherwise cannot be protected, such as functional elements of GUIs and general appearance. It is recommended that legal advice be sought in the market

where such protection is relied upon, as the rules applicable to unfair competition vary from one country to another. For trademarks, this is less of a problem, as many aspects of trademark protection are similar in all markets.

When protected by a trademark, the features of the mobile app covered are protected against confusion among consumers. This can be valuable in the marketplace: when competitors make available apps with similar features and for similar types of goods or services, and consumers are likely to be confused, the trademark owner can invoke their right to stop the use of the sign in question. In addition, a registered trademark could also confer protection for reputed marks that goes beyond confusion: such marks are protected against use that dilutes its distinctive character, tarnishes its reputation and, in Europe, also takes unfair advantage of the mark's reputation or distinctive character. In essence, as their reputation grows, mobile app developers can benefit from additional protection of that reputation.

4.3.2. Trademarks in mobile applications

4.3.2.1. Color combinations used in apps

Colors and color combinations in mobile applications generally can be protected by trademark law. Protection of a certain color combination can prove useful when consumers recognize color patterns making it possible to easily distinguish apps. There are, however, two important conditions that must be fulfilled to be eligible for trademark protection. First, the colors used must be identified precisely with the color code, and sometimes a sample and their systematic arrangement must be clearly set out. Applying for the combination of two colors in whatever form will not be sufficient; a verbal or visual definition of how the colors will be arranged is necessary. For the specific criteria, it is advisable to make inquiries with a trademark attorney in the relevant jurisdiction.

Second, the color combination must confer commercial origin. These colors are considered distinctive only if consumers recognize an app on the basis of merely the colors used (without any other trademarking information). Since consumers do not usually perceive colors as indicators of origin, app developers may only be able to register a color combination after having used it in the marketplace and thereby having acquired distinctiveness, or in US legal terms "secondary meaning". Proving this can be difficult, but factors such as geographical extent, intensity and longevity of use, market share, and investment in promotion, etc., should be used to indicate acquired distinctiveness.

4.3.2.2. Esthetic elements of GUIs

Only esthetic elements of GUIs can benefit from trademark protection; features that are essential for function or necessary to achieve a technical result are excluded from trademark protection. The interpretation of what functional and technical features are depends on the jurisdiction, but for mobile applications this generally regards 1) what the software does and 2) how it does so, in interaction with the user. Functional

aspects in a mobile app could be a filtering system for food deliveries, a function that transfers an invoice into a banking app, or a function that recognizes the music played.

Regarding esthetic elements of GUIs, they qualify for trademark protection only if consumers recognize the origin of the mobile app by just looking at the GUI without any other trademarking information. Even when an interface is unique, consumers are usually not in the habit of perceiving interfaces as indications of source, so this may be difficult to show for GUIs that are not yet known to consumers. When a GUI has been used in the marketplace, consumers may have learned about the connection between the interface and the mobile app producer; in this case the esthetical features may have acquired distinctiveness.

4.3.2.3. Unfair competition principles for functional elements of GUIs

Since functional elements cannot be protected through trademarks, unfair competition laws may provide an option for protection for them. Registration is not required for invoking this protection. However, functional or behavioral features of a mobile app can benefit from protection only if they do not fall under the functionality exception applicable in common law trade-dress or get-up protection. This means that when choices made during the development of the feature were merely functionality-related and not arbitrary, unfair competition law does not provide a tool for protection either.

Thus, when a third party only imitates the concept of an app that, for example, transfers invoices into a mobile banking app, protection through unfair competition laws may not prove useful. But if it also imitates the way in which the concept is being put into effect (the way the user must link the invoice to the banking app), unfair competition laws, in common-law system trade-dress laws, might come into play.

While unfair competition laws differ from one country to another, they can generally protect features of a mobile app against imitation, insofar as the imitating application could give rise to confusion as to its origin or affiliation. In a common-law jurisdiction, the plaintiff would have to establish that the defendant's actions amounted to misrepresentation and led to consumer deception. In civil-law jurisdictions, unfair competition laws are broader and less predictable. Whether protection through unfair competition law is likely to be successful has to be assessed for the specific circumstances at issue and the jurisdiction involved.

4.3.2.4. Unfair competition protection for trade dress and get-up of GUIs

In addition to functional elements, unfair competition laws are also relevant for the protection of the overall visual appearance and characteristics of a product or its packaging, insofar as they signify the source of the product to consumers. In commonlaw systems, this is referred to as trade-dress protection. In civil-law jurisdictions such as Germany, unfair competition laws protect the consumer against confusion when an imitation of a specific exterior causes the imitation to appear as an unfair commercial practice. For mobile apps, trade dress makes it possible to protect the "look and feel" of software graphics. This can include the interactive elements and the overall mood, style and impression of GUIs, as well as elements such as photos, borders and frames. This broad scope of protection can be useful for elements that cannot be protected under trademarks, or when the rights conferred by copyright are limited to exact or nearly exact copies of the GUI as a whole.

But obtaining protection for a GUI through trade dress faces the same difficulty as trademark protection: consumers must feel an origin associated with the look. Since consumers do not usually perceive GUIs as indicators of origin, GUIs can be protected only if they have been used in the marketplace and acquired distinctiveness. For GUIs, this is arguably more difficult to establish than for a bricks-and-mortar place of business.

4.3.3. Trademark tools

When app developers consider trademark or unfair competition protection useful for parts of their app, they may want to make use of certain tools. These tools are necessary to obtain protection but also to avoid losing protection. In this section we discuss where and how to register a trademark, what information is required, how to avoid revocation of the mark because of non-use, and the advantages and risks connected with trademarks and unfair competition protection.

4.3.3.1. Registration

Trademark registration is preferable to a situation of unregistered rights, because registered rights offer the broadest scope of protection. Unregistered right protection mostly relies on the law of unfair competition, which differs substantially from one country to another. For the protection of functional elements and trade dress, the relevant tool is the unfair competition law, which does not require registration. When registering a trademark, mobile app developers need to decide which markets they want to get registration for. This can be individual countries (US, Zimbabwe) or a region (the EU, Benelux). In the EU, a trademark can be registered for the entire EU market. On the other hand, it is also possible to choose a national trademark for only one country. Registration can be done online for most markets.

Examples of websites where online registration is possible:

- European IP Office (EUIPO)
- <u>USTPO</u>
- IP India
- Brazilian INPI
- Zimbabwe Department of Deeds Companies & Intellectual Property

4.3.3.2. Procedure for registration

Registration is done with the national offices or the regional office. Should the marketing strategy involve several countries as core markets, there is an option to file an international trademark application through a national trademark office based on a basic application or registration with the office of origin. The international procedure under the Madrid System allows an applicant to file with WIPO all required documents once, select up to 123 countries for which they want protection and pay one set of fees. This may be an advantageous tool if an app developer would like to register a sign as a trademark in multiple countries. WIPO hosts the WIPO <u>Global Brand</u> <u>Database</u>, which allows app developers to search prior marks before applying in order to avoid potential conflicts.

Under the Madrid System, the first step entails applying for protection in the "home" IP office. This registration or application is known as the basic mark, which is needed before an international application can be submitted to the same office. The home IP office certifies the international applicant and in a second step forwards it to WIPO, who formally assesses the application. If all formal requirements are fulfilled, the mark will be registered, published and the designated Contracting Parties will be notified. In the last step is carried out by the Offices of the designated Contracting Parties: they examine the international registration and determine the scope of protection under domestic law. The applicant will be informed about the outcome in each designated country by WIPO.

In principle, the procedure is similar in most systems of registration: the applicant fills in all relevant information, represents the sign clearly and precisely, and pays the fee. The extent of the registration fee depends on the market protection sought for and the number of classes of goods and services in relation to which the trademark should be registered. The online registration fee for a European trademark in one class is 850 euros, with further costs for each additional class. A trademark for only Germany in three classes costs 290 euros if registered online, with further costs for each additional class. In the US, the costs amount to 225 dollars (TEAS Plus) or 275 dollars (TEAS Standard) per class of goods or services. The application fee in India varies between 4,500 and 9,000 rupees per mark and per class, depending on the type of applicant. In Zimbabwe, the registration fee is 200 dollars. If protection is sought via the Madrid system, the costs amount to a basic fee of 653 Swiss francs for an international application (903 Swiss francs if the reproduction is in color), with an individual fee payable for each designated Contracting Party.

Most trademark offices will run a search (often at the time of application) through their system to check for similar prior marks. If the search report does not indicate similar prior signs and the Office determines that the application fulfills the legal requirements, the trademark is published. Then a period of opposition (usually a few months, in the EU 3 months) starts for competitors to file an opposition. They do so if they have a prior identical/similar sign used for identical/similar goods or services and when the sign to be registered is likely to confuse the consumer or is likely to harm the prior mark's distinctive character or reputation, or, in the EU, if it free-rides on its reputation

or distinctive character. If no opposition is filed or if the opposition claims are unfounded, the mark will be registered.

4.3.3.3. Required information

Generally, the information required when filing a trademark is relatively simple: reproduction of the mark, the classes of goods and services for which registration is sought and details regarding the applicant. For countries where first-to-use systems are in place, proof of use or a statement of intention to use the mark must also be submitted.

The representation of the mark needs to be precise and clear. For some types of marks (such as color marks or multimedia marks), this requires special attention, as each country will specify the conditions according to which marks should be registered. For animated GUIs, the representation may be more complex, even though many jurisdictions now allow for motion or multimedia marks.

4.3.3.4. Avoiding non-use

If a trademark is registered, the owner of the mark needs to ensure that it continues to be used, as non-use of a trademark could lead to revocation or loss of registration. The owner must also pay attention to the use of the mark by authorized licensees or associated third parties and ensure that the mark is used "as registered". Use entails genuine use in the marketplace and not merely for internal purposes. Marketing material alone may not be sufficient to show use; actual sales of the product or service with which the trademark is registered (for apps this may be downloads) are important.

4.3.4. Advantages and risks

	Advantages		Risks
•	Unfair competition rules can offer protection for parts of mobile apps that otherwise cannot be protected (functional elements of GUIs, general appearance).	•	Filing and renewal costs arise for every market and every additional class for which the sign will be registered.
•	Trademark protection offers protection against confusion. For well- known marks, protection extends to harm to the distinctive character or reputation, and in Europe also against unfair advantage taken.	•	Protection is dependent on use. Non- use of a mark can lead to revocation of the mark. Also, non-action by the trademark holder against infringing use can lead to revocation because of acquiescence.
•	Registering the trademark in essential markets allows app developers to make an initial assessment of their app's popularity.	•	Registering the trademark in non- essential markets later brings the risk of third parties registering the sign in that market first.
	Successful trademark use in relation		

 Successful trademark use in relation to a mobile app can become an image with which consumers identify themselves. App developers can benefit from such a brand image for follow-on products.

4.3.5. Resources

EUIPO, eSearch Plus

- WIPO, Global Brand Database
- WIPO, Madrid System

4.3.6. Summary

Key Points: Trademark Protection

- Trademarks function as badges of origin in the marketplace. For consumers to recognize products, trademarks help them distinguish a product from other similar products. They also communicate certain characteristics and the image of the product.
- Signs such as logos, sounds, color combinations and esthetic aspects of GUIs can be registered as trademarks if they have distinctive character. Protection can last indefinitely, as long as the registration is renewed. The potential unlimited period of time makes trademarks a valuable tool.
- Trademark protection extends to avoiding consumer confusion and the protection of a mark's distinctive character and reputation.
- The get-up of an app, functional elements of GUIs as well as unregistered marks can be protected through unfair competition laws. These, however, differ significantly among countries and confer a lower scope of protection than registered trademarks.
- A mark must be registered in relation to services in which the app will be used. Considering future developments is also advisable.
- Registering marks in many markets for several classes will be costly. Choosing the core markets for protection first is advisable. This will also determine the procedure to follow, whether national, regional or international.
- Making use of a mark in the registered classes and markets is essential to keeping the mark. After a grace period of a few years, third parties can file a claim for revocation if a mark has not been used.

4.4. Designs

Design in the context of IP protection refers to the ornamental or esthetic aspects of a product. In the context of mobile applications, design rights are primarily relevant to the protection of GUIs. A GUI as a whole and some of its component parts, such as icons, animations and transitions may be protected using design rights. Industrial design protection can take the form of unregistered designs, registered designs or design patents. These rights protect the appearance of a product: color, shape, lines, contours and patterns. They do not apply to the functional aspects of a product.

In this section, we do not address how designs can also be protected using copyright, as discussed in Section 4.1.1.2. We do, however, point toward important differences in the scope of protection offered by these two IP tools. We furthermore present the most relevant tools: registration; the procedural steps; required information; and, finally, the advantages and risks connected to industrial design protection.

4.4.1. Design basics

Design protection is territorial, as are all IP rights. Where unregistered design rights are available in certain jurisdictions, these rights arise automatically, so formalities are not necessary for a work to be protected and for protection to be enforced. The requirements for a design to be protected vary among jurisdictions. Generally, designs must be independently created and new or original:¹²

- The **novelty** requirement stipulates that the design must not have been previously made available to the public.
- The **originality** requirement means the design must have been created by the designer and not be a copy of an existing design. An original design must be different from established designs and combinations of basic design features.
- In the EU, a design must also have individual character.¹³

Certain designs are excluded from registrability. In addition to designs dictated solely by technical function, flags, state symbols and obscene designs are not registrable. It is advisable to check the rules of the relevant jurisdiction and to consult an IP professional for the specific restrictions in a system.

When a design is registered, the owner has the right to prevent third parties from making, selling or importing articles bearing or embodying a copy, or substantially a copy, of the protected design.¹⁴ Such use is only an infringement if it is made for commercial purposes.

¹² See Art. 25(1) of the TRIPS Agreement.

¹³ See Art. 6 of EU Regulation 6/2002.

¹⁴ See Art. 26(1) of the TRIPS Agreement.

The duration of protection of a design varies according to the type of right and jurisdiction. In the US, design patents are granted for 15 years,¹⁵ in the EU a registered community design lasts for 5 years and may be renewed for up to 25 years, and in China design patents are granted for 10 years. As of June 1, 2021, the term of protection will be increased to 15 years.¹⁶

Unregistered designs generally have a shorter duration of protection than registered design rights; in the EU, for instance, unregistered rights can be protected for 3 years.

4.4.2. Design protection for GUIs

GUIs displayed on a mobile phone and components of GUI, such as typefaces, icons, and graphics, may be eligible for design protection in several countries. It is important to note that this is not the position in all jurisdictions. The Indian Design Office, for example, has denied protection to GUIs.

The sweet spot of design protection for GUIs, in India and in other jurisdictions as well, lies between designs or aspects of designs dictated solely by technical function, and those aspects that also demonstrate esthetic appeal. The core function of a GUI is to enable interaction between a user and a device, but the type of interaction can be chosen for esthetic reasons as well. It is this latter part of GUIs that may benefit from design protection in several jurisdictions.

Another difference among countries is that some permit only static elements of a design to be protected (e.g. Russia), while others allow registration of animations and transitions (e.g. the US). Changeable icons (such as .gif files) and animations have often become the subject of design protection. When determining which elements are available in which country for design protection, seeking legal advice from a national professional is recommended.

4.4.2.1. Differences between copyright and industrial design protection

In certain jurisdictions like the EU, designs may also be protected by copyright if the design qualifies as a copyright work and if it is original. In essence, in cases in which a functional design also amounts to an artistic work that reflects the author's own intellectual creation (in EU language), it may enjoy protection under copyright. The benefit of copyright protection is that it arises without registration and that protection lasts for the life of the author plus 70 years, as compared to 10 to 25 years for registered design rights or design patents.

However, design rights can be applied for regardless of its artistic attributes. It is the appearance of a functional product that is at the heart of design protection. Protection extends to articles bearing or embodying a design which is a copy, or substantially a

¹⁵ Before May 13, 2015, design patents were granted for 14 years only. For design applications filed on or after May 13, 2015, the term is 15 years.

¹⁶ See Article 42 4th Amendment of the Chinese Patent Law, approved by the Standing Committee of the National People's Congress on October 17, 2020.

copy, of the protected design. In this, it provides a monopoly right over the appearance of a product. Copyright, in contrast, does not provide a monopoly right that can be enforced against works of independent creation but only restricts copying.

4.4.3. Design right tools

When determining that design right protection is valuable for protecting certain parts of the mobile app, certain tools are available to obtain protection. We discuss registration tools at national, regional and international offices, the application process, exclusions from registrability, confidentiality agreements and monitoring.

4.4.3.1. Registration procedures

To register a design, an application may be filed at the national IP offices in the countries where protection is sought. Some of the major national offices:

- China National Intellectual Property Administration
- Patent Office (India)
- National Institute of Industrial Property (Brazil)
- United States Patent and Trademark Office
- United Kingdom Intellectual Property Office

If protection is sought in more than one country, it is possible to make an application through a regional organization, such as:

- the <u>European Union Intellectual Property Office (EUIPO)</u> for protection in EU Member States;
- the <u>African Regional Industrial Property Office (ARIPO)</u> for protection in the organization's 19 Member States; and
- the <u>Benelux Office for Intellectual Property (BOIP)</u> for protection in Belgium, Luxembourg and the Netherlands.

It is also possible to make an international application through WIPO's <u>Hague System</u> for the International Registration of Industrial Designs. This system offers a simplified process for registering designs. Users can file one application that covers up to <u>91</u> <u>countries</u> through the International Bureau, indicating each Contracting Party where protection is sought. This system has several advantages, including that applications can feature multiple versions of a design applying to one product and can be filed in one language, with fees payable in one currency. The Hague System can be used by citizens or domiciled residents of contracting parties, or applicants with a real and effective industrial or commercial establishment in the territory of a contracting party. Under the Geneva Act (1999) of the Hague Agreement, an international application may also be filed on the basis of habitual residence in a Contracting Party.

4.4.3.2. Application process

When it comes to making an application to register a design, the applicant may elect to nominate an IP agent to act on their behalf (and this is recommended in some systems, such as China, where language accuracy is extremely important). The steps for filing an application generally include the following:

- Completing an application form as required by the relevant IP office;
- Providing the required materials. These are determined by local laws and may include a reproduction of the design, written description of the features of the design, translation of documents, and declaration from the creator. Most IP offices have detailed rules on how a design should be graphically represented in an application, and it is advisable to refer to those guidelines;
- Paying a filing fee. As the amount may vary, it is advisable to refer to the relevant IP office;
- In the EU, no substantive examination takes place prior to registration. The registration hence becomes effective once the application form is completed.

In some jurisdictions, the IP office may have specific rules for the registration of a GUI. In China, for instance, an application to register a GUI must include an image of the GUI framed in the appliance in which it is intended to be used. As of June 1, 2021, a design patent can protect the design of the GUI itself, with the parts of the product that are not claimed, presented with dotted lines. To register an animation or transition as an element of a GUI, multiple (still) images illustrating the animation or transition are generally required.

When lodging an application, one must indicate the class of products for which the design is intended to be used. GUIs belong to Class 14-04 "Screen Displays and Icons" in the international classification for the registration of industrial designs (known as the Locarno Classification).

Example: Application Guides

- <u>China IPR SME Helpdesk's Guide to Understanding and Using China's</u> <u>Design Patent</u> provides an English-language guide to obtaining a design patent in China, and helpful comparison of design protections in China and the EU.
- United States Patent and Trademark Office Design Patent Application
 <u>Guide</u>
- <u>The Hague System of the International Registration of Industrial Designs:</u> <u>Main Features and Advantages</u>

4.4.4. Resources

Searchable databases:

- <u>WIPO Global Design Database</u> facilitates free searches of registered designs in the Hague System and in certain national registries.
- <u>Hague Express</u> provides information on current and past designs registered in the Hague System.
- The <u>eSearch Plus</u> portal can be used to search the EUIPO public register of Registered Community Designs.

4.4.5. Advantages and risks

While this form of protection applies primarily to GUIs, design rights may be combined with other IP tools as part of a comprehensive strategy for protecting mobile applications.

Advantages

- Registered design protection is generally straightforward, low-cost and fairly quick to obtain (the average time between application and grant is less than 4 months in China, and approximately 7 months in India).
- Registration establishes strong protection for independently created deigns that are novel, or original.
- Many jurisdictions allow cumulative
 In protection, i.e., a design may be protected by both copyright and industrial designs.

- Relying on an unregistered design right may prejudice a developer's ability to obtain a design patent or registered design if the design has already been made public.
- The novelty requirement means that steps must be taken to ensure the design is not disclosed to the public before registration.
- In some jurisdictions, design protection and copyright protection are mutually exclusive. For example, in India, copyright ceases to subsist in a design once it has been registered, or once a design capable of being registered has been reproduced more than fifty times.

4.4.6. Summary

Key points: design protection

- Design protection extends to the appearance of a functional product. In the case of mobile applications, these are the esthetic aspects of GUIs. They do not have to possess artistic attributes. Instead, designs must be independently created (not copied) and novel, or original.
- Designs dictated by solely technical function cannot be protected through design-right protection.
- The scope of protection is broader than copyright, as it protects against the creation of articles bearing or embodying a design which is a copy, or substantially a copy, of the protected design. Copyright, in contrast, protects against copying. Design right protection differs in its length between 10 to 25 years.
- The registration of animation or transitions in a GUI can be registered in most countries. Images displaying the movement will be required in the application process. For detailed information about what is required, professional advice in the particular country is advisable.

4.5. Trade secrets

Trade secrets are can protect commercially valuable information. They can potentially be used to protect a broad range of subject matter, including information that cannot be protected by other tools, such as copyright, patent or design rights. If, for example, a developer wishes to protect a functional aspect of an app that does not meet the requirements for a patent, or if the costs of registering a patent are prohibitive, trade secrets may be a useful tool if the information will remain secret.

In this section, we discuss the availability of trade secrets for code and architecture of a software and for the functional aspects of GUIs. We present the most common tools on how to use trade secrets as well as some examples. We also examine the advantages and risks of using trade secrets as a tool of protection.

4.5.1. Trade secret basics

Generally speaking, a trade secret can protect parts of mobile applications in the following cases:

- The underlying information is secret, in the sense that it is not publicly available.
- It has commercial value.
- Where reasonable steps have been taken to ensure its secrecy.

The protection restricts others from disclosing, acquiring, or using the trade secret without permission. Trade secrets require no formal registration to qualify for protection. Unlike other IP tools, the duration of protection is potentially unlimited, as long as the information remains secret. However, trade secrets only protect against someone using the confidential information without permission. If others generate the information on their own, there is no protection. Generally, the protection of trade secrets can vary significantly from country to country. Also, compared to other IP rights, it can be more difficult to enforce such protection. It can be useful to combine trade secret protection with other IP rights as part of a comprehensive protection strategy for mobile apps. Particularly in the development phase of the mobile application, trade secrets tools for elements of an app that may later be patented or protected by design protection in order to secure novelty. Trade secrets can also be relied upon to keep secret valuable information that cannot otherwise be protected.

4.5.2. Trade secrets in mobile applications

4.5.2.1. Code and architecture of computer programs

Trade secrets can be used to protect a mobile application's code and architecture in situations where the code is not publicly available. They may therefore be useful in the development phase, before an app is brought to market, or for cloud-based apps, when code is not available to users. Once an application's code and software

architecture are publicly available, it can no longer be protected using trade secrets measures.

4.5.2.2. Functional aspects of GUIs

Trade secrets are generally not a good form of protection for graphical user interfaces, because the user can easily tell how they work. A fundamental feature of trade secret protection requires the protected information not being publicly available.

4.5.3. Trade secret tools

One of the general requirements for trade secret protection is that steps have been taken to protect the information. There are a number of tools that can be used to keep commercially valuable information secret, including the following:

- Non-disclosure and non-compete clauses in employee and contractor agreements;
- Non-disclosure agreements with external partners when disclosing confidential information;
- Limiting the number of people who can access confidential information;
- Employee education about confidentiality.

Non-disclosure clauses create a contractual obligation to not reveal confidential information. These clauses can specify the conditions under which the information can be shared, the duration of the obligation to maintain confidentiality, and the penalty for unauthorized disclosure. Non-compete clauses specify a period of time a former employee or partner may not work with a competitor. This can prevent the sharing of confidential information and know-how with others. Agreements containing non-disclosure or non-compete clauses should also specify the laws and jurisdiction that apply to the agreement. When making use of non-disclosure and non-compete clauses, it is advisable to seek legal advice.

4.5.4. Examples and resources

- <u>The European IPR Helpdesk Factsheet on Trade Secrets</u> is a guide for trade secrets in the EU, including helpful tools for trade secret protection.
- <u>The European IPR Helpdesk Fact Sheet Non-Disclosure Agreement: a</u> <u>business tool</u> is a guide for the use of non-disclosure clauses in the EU.
- <u>The UK Intellectual Property Office Non-Disclosure Agreements Guide</u> sets out some of the benefits of using non-disclosure agreements in the context of UK law.
- <u>The European IPR Helpdesk Non-disclosure Agreement Template</u> is a sample of a non-disclosure agreement, which can be adapted to meet the requirements of a specific situation.
- <u>The UK Intellectual Property Office Example One-way Non-Disclosure</u> <u>Agreement</u> is an example non-disclosure agreement that can be adapted to specific situations.

4.5.5. Advantages and risks

Advantages Risks • Trade secrets are a straightforward low-cost way to protect information • Keeping information secret is not easy. It requires active management

- low-cost way to protect information and can be combined with other IP rights as part of a comprehensive protection strategy for mobile apps.
- Trade secrets tools may be useful in the development phase, to protect elements of an app that may later be patented or design protected, or that cannot otherwise be protected.

Keeping information secret is not easy. It requires active management, including requiring confidentiality for employees and contractors that come in contact with the information.

• Trade secret protection does not protect against independent creation of the same information by third parties.

4.6. Confidentiality and ownership

When developing the application, app developers may need the help of other people, including employees and external parties. As they develop the application, they may want to keep the details confidential. This can preserve their ability to protect the application through certain IP rights, like design, utility patents and patents. When drafting confidentiality and IP clauses in contracts, it is advisable to seek legal advice.

4.6.1. Non-disclosure agreements

Before engaging an outside party, it should be made clear whether it is expected that the information exchange is kept confidential. Initially, before a formal relationship begins, this can be done through a non-disclosure agreement. The agreement allows parties to specify which information, material or knowledge they consider to be confidential and therefore wish to restrict access to.

Examples of non-disclosure agreements:

- <u>WIPO Multiparty confidentiality agreement</u> presents a template agreement with several options.
- <u>The European IPR Helpdesk Fact Sheet Non-Disclosure Agreement: a</u> <u>business tool</u> is a guide for the use of non-disclosure clauses in the EU.
- <u>The UK Intellectual Property Office Non-Disclosure Agreements Guide</u> sets out some of the benefits of using non-disclosure agreements in the context of UK law.
- <u>The European IPR Helpdesk Non-disclosure Agreement Template</u> is a sample of a non-disclosure agreement, that can be adapted to meet the requirements of a specific situation.
- <u>The UK Intellectual Property Office Example One-way Non-Disclosure</u> <u>Agreement</u> is an example non-disclosure agreement that can be adapted to specific situations.

4.6.2. Employment, partnership or cooperation agreements

If app developers decide to work together with other parties, any confidential terms should be incorporated into the contract that governs their relationship. Employment or cooperation agreements can also be used to clarify and consolidate ownership of IP rights in works or inventions created in employment situations or through joint development with third parties. An intellectual property clause will set out who owns what, and any arrangements for compensation and attribution for employees or contractors.

Examples of such clauses can be found at the:

- European IP Helpdesk Guide to IP and Contracts
- China IPR SME Helpdesk Guide to Using Contracts

Generally, a clause may provide for the following:

The Employee acknowledges that all IP that the Employee generates, modifies or improves in the course of the Employment Contract is and shall remain the Employer's sole property during and after the Employment Period within the legal limits.

4.6.3. Summary

Guidelines: protection of trade secrets

When deciding whether to protect information by keeping it a trade secret, or to rely on another IP right, the following questions may be of help. These are key considerations, and answers to these questions will help to guide the decision-making process.

- Is the information patentable? If yes, patent protection may present a worthwhile alternative tool. Trade secret protection is nevertheless useful during the development phase.
- Is the information commercially valuable and worth protecting? In this case only are trade secrets a viable option.
- Will others be able to independently develop or reproduce the information? Trade secrets will not protect against third parties developing the same information.
- Is there a risk of someone else patenting the information? If yes, a patent granted to a third party on the information may prevent app developers from continuing using the information.
- Will it be possible to keep the information secret? In-company measures and non-disclosure agreements are important tools for maintaining secrecy.

5. DISSEMINATION: TOOLS TO DISTRIBUTE MOBILE APPLICATIONS

Mobile application developers may want to regulate the use of their app by consumers and the availability of the app on application platforms. This can be regulated by different types of licenses and agreements. We explain the purpose of each of these tools, present essential components thereof, provide example licenses and discuss possible advantages and risks.

5.1. Licensing mobile applications to other parties

Once an app has been created, app developers can enter into license agreements with commercial parties, distributors and end users. These agreements allow developers to determine the rights and conditions under which others can use the app (or parts thereof).

Licenses differ according to which party they are intended for and whether they concern an IP right or a specific product and technology. IP licenses, for example, grant permission to reproduce and distribute a copyright work. Product or technology licenses, for example, authorize the licensee to make, use or sell products based on a type of technology. End-user licenses establish conditions for end users to access and use the app.

5.1.1. IP licenses

As outlined in Section 3, a license is an agreement in which the owner of an IP right (the licensor) grants permission to use the IP right to a third party (the licensee), within the limits of the contract. This process of making IP available for others to use is known as "licensing out". Licenses can apply to specific IP rights, such as the right to use a patented process, or to all the IP rights attached to a product such as a mobile app—copyright, patents, trademarks, and design rights. Examples of such licenses are software licenses, which are granted to third parties who want to work with the software developed for the app, copy it or adapt it.

The decision to license out technology should take into account a range of market and strategic considerations (outlined in greater detail in the European IPR Helpdesk Bulletin on IP Licensing and Guide to Commercialization). Given the potential complexity of licensing out IP, it is highly recommended that legal advice be sought when negotiating licensing agreements.

5.1.1.1. Key considerations

Here, we present several key considerations that app developers should take into account when deciding which rights they want to license, what territorial and material scope, which limitations should apply, etc. We recommend consulting a licensing professional of the relevant market for advice. The resources listed also provide further

guidance on how to use licensing most effectively. For general contract aspects, such as duration of the license, termination of the license, warranties and disputes, see Section **Erreur ! Source du renvoi introuvable.**
Key considerations: IP licensing

• Rights:

- 1. Copyright licenses for software, etc., will include the rights of use and reproduction, modification and making derivative works and distribution. In case of software licenses, an app developer should be mindful of whether they hold the rights to enter into further licensing agreement and under what conditions. This is particularly important when open-source software has been used.
- 2. Trademark licenses grant the right to use and apply the mark on and in relation to specified products or services.
- 3. Patent licenses can include the right to manufacture, use and sell a licensed product.
- 4. Technology licenses cover the rights to develop, manufacture, practice and sell licensed technology.
- **Limitations**: The rights granted can be limited to a concretely defined field of use. This means that the licensee can use the IP only in the defined field (e.g. gaming), while the app developer retains the exclusive right to exploit or license the same IP in a different field (e.g. banking).
- **Compensation**: For the app developer, one important reason to license the IP of part of the app is to receive royalties. The license will need to determine whether a lumpsum is payable or if royalties are to be calculated on downloads or any other appropriate unit. It should also include an obligation on the part of the licensee to keep accurate records, to submit reports that identify the basis for calculation (such as number of downloads) and establish fixed dates for payment.

• Exclusivity:

- 1. Non-exclusive licenses grant the licensee the right to use the licensed product or technology, and the licensor retains the right to grant further licenses and to use the product or technology themselves.
- 2. Exclusive licenses grant the licensee exclusive use of the product or technology, meaning the licensor themselves cannot use the licensed IP.
- 3. Sole licenses grant the licensee use of the IP, and the licensor agrees to not grant additional licenses but retains the right to make use of the IP themselves.
- **Territorial scope**: License agreements are often limited to specific countries or regions. When considering the territorial scope, both the location of the users and the app store should be considered.
- **Sublicenses**: Some licenses allow the license holder to provide license rights to another party, known as sublicenses. Some contracts automatically allow sub-licenses and others require permission from or notification of the IP owner. One reason for an app developer to allow sub-licensing is to receive further royalties. If sub-licenses are allowed, the contract should clarify whether the rights will be the same and what happens to the sub-licensing agreement when the licensing agreement ends.

5.1.1.2. Examples and resources

Example clauses:

- The Licensor hereby grants to Licensee a[n] [exclusive/non-exclusive] license in the Licensed Territory to make, use and sell any Licensed Products in the Licensed Field of Use.
- The Licensee shall pay to the Licensor royalties calculated by reference to Net Sales of the Licensed Products sold by the Licensee at the rate of [...].
- The License includes the right of the Licensee to grant sublicenses to third parties, provided that
 - (i) any sublicenses granted by virtue of this clause are subject to the provisions of this Agreement and
 - (ii) the Licensor gives the Licensee its prior written approval regarding the Licensee's choice of sublicensee.

Resources:

- <u>WIPO Handbook on Key Contracts for Mobile Applications a developer's</u> perspective
- <u>WIPO Successful Technology Licensing</u>
- UK Intellectual Property Office, Licensing Intellectual Property
- European IPR Helpdesk, Your Guide to IP and Contracts
- <u>European IPR Helpdesk, Fact Sheet: Commercialising Intellectual Property:</u>
 <u>License Agreements</u>

5.1.2. End-user license agreements

As mobile apps can be protected by various IP rights, users must be authorized to download, install and use an app. This authorization can be made through an End-User License Agreement (EULA). An EULA is a contract between the developer or vendor of a mobile app and the user of the application. The key considerations when deciding on the terms of the EULA include the scope of the license (what is authorized and what is restricted) and the requirements of distributors (app stores).

5.1.2.1. Scope of the license

An end-user license agreement authorizes a user to download, install and use the app, and may also impose various restrictions on the app's use, such as copying, modifying or disassembling the app. The EULA for Microsoft's Office 365 app,¹⁷ for instance, authorizes a user to use and install copies of the application but imposes restrictions, including the following:

¹⁷ Microsoft, End User License Agreement for Microsoft Dynamics 365 Business Central for Android (Tablet and Phone), 17 August 2018, available at <u>https://www.microsoft.com/en-us/download/details.aspx?id=56670</u> (22 December 2020).

- Users may not work around technical limitations in the software.
- Users may not reverse engineer, decompile or disassemble the software, except to the extent permitted by law.
- Publish the software for others to copy.

An EULA may also include clauses to protect the developer, such as limitation of liability and a warranty disclaimer. For further information on these aspects, see <u>WIPO</u> <u>Handbook on Key Contracts for Mobile Applications – a developer's perspective</u>.

Once drafted, the EULA can be linked on the app's profile page or the developer's web page. It should also be included within the app itself.

5.1.2.2. App store requirements

App stores may have certain EULA requirements for apps distributed through their store. Apple, for example, has a default <u>Standard EULA</u> that applies when a developer does not use their own custom agreement. This agreement contains provisions on the scope of the license, as well as a limitation of liability, exclusion of liability for third-party materials and exclusion of warranties.

If an app is distributed by Google Play, the <u>Developer Distribution Agreement</u> provides that developers may choose to include their own EULA, provided it doesn't conflict with the terms of the Developer Distribution Agreement. The <u>Google Play Terms of</u> <u>Service</u> also applies and includes some restrictions for end user's use of IP, such as prohibitions against modification and transfer of content. It is important to note that Google Play's default terms do not include a limitation of liability, so it is advisable to use a custom EULA when developing an Android app, rather than relying on the standard terms.

5.1.2.3. Examples and resources

- Google Play
 - Google Play Developer Distribution Agreement
 - Google Play Terms of Service
- Apple
 - Apple Media Services Terms and Conditions
 - Apple Standard EULA
 - Instructions for Minimum Terms of Developers' End-User License Agreement
- The website TermsFeed has various EULA resources, including:
 - Android's Default EULA
 - Apple's Default EULA
 - Examples of EULAs for Mobile Apps
- <u>WIPO Handbook on Key Contracts for Mobile Applications a developer's</u>
 <u>perspective</u>

5.1.3. Advantages and risks

Advantages	Risks
• End-user license agreements (EULAs) can be tailor-made by app developers to allow and prohibit certain uses of the app.	• While the standard EULAs of major app stores provide a good basis for a contract with the end user, they may omit important aspects such as limitation of liability. Legal advice regarding the terms is recommended.
	• When granting software licenses, app developers need to make sure that they own the rights that they are licensing to third parties. This is particularly important when software has been used from open-source licenses.

5.1.4. Summary

Key points: licensing out

- There are different reasons for licensing out part of the IP in a mobile app. One of the main benefits is the compensation app developers can receive.
- If an app developer decides to license out to third parties, there are different tools to do so, depending on the type of party. If the other party is a commercial player, an IP or technology license is usually used. If the other party is the end user, an EULA is the most common tool.
- When drafting licenses, we recommend seeking advice from a licensing professional in the territories in which the license should apply.
- IP or technology licenses can be tailor-made to the needs of both parties. App developers should determine key considerations that the license will regulate.
- EULAs are provided to end users. Often, the app store that makes the developer's app available has a standard EULA that the app developer can choose. The app developer can set up their own EULA if they want to deviate from these clauses.

5.2. Distribution agreements with app stores

An app developer will usually distribute the app to end users through app stores. We previously discussed tools for regulating the relationship with end users. But the relationship with the app store as the distributor of the app also needs to be regulated. Distribution agreements with app stores are a common tool to do so, and they can take different forms. Here, we discuss key aspects in these agreements that developers should pay attention to, either when they are negotiating such agreements or, in situations when there is little room to negotiate, what the possible consequences are. These agreements differ from one app store to another.

5.2.1. Terms of the license granted

Distribution agreements will commonly contain provisions on the key aspects below.

Key considerations: distribution agreements

- License: App developers should be careful to grant a license to distribute the app rather than transfer its ownership. The transfer of ownership would entail that the app developer loses control over the app, like making it available in other app stores.
- Non-exclusive: When granting a license, app developers may want to consider whether the license should be non-exclusive or constitute sole licenses. Exclusive licenses should be avoided if app developers also want to place the app in another app store.
- **Warranties**: App stores will require the developers to declare the ownership of the IP in the app and whether another party's material has been used. This is a common feature of distribution agreements. Other warranties may be included. It is advisable to check whether the app developer can make such declarations.
- Terms of EULA: A distribution agreement will set out which EULA the app developer can use, whether the EULA of the app store must be exclusively used, or whether app developers can develop custom EULAs. Where app developers want to use their own EULA, it will be necessary to negotiate this possibility.
- **In-app purchases**: If the app developer's app contains in-app purchases, the app store may charge service fees to process them. Developers should seal to clarify in the agreement the extent of these costs and the procedure to process them.
- Liability: App stores will exclude liability regarding any breach of applicable law, including infringement of IP rights. This means that if the app contains elements or content that is infringing the IP rights of third parties, all liability rests with the app developer. App stores usually want to reserve the right to remove the app immediately.
- **Privacy and legal rights of user**: App developers need to agree to protect user's rights in accordance with the applicable privacy and data protection law. These laws vary from one jurisdiction to another and therefore should be carefully checked.

5.2.2. Examples and resources

License:

- 5.1 [...], You authorize Google on a non-exclusive, worldwide and royalty-free basis to: reproduce, perform, display, analyze and use Your Products in connection with [...] (Google App Developer Agreement June 2020)
- 5b) You do not transfer ownership of any App or In-App Product to Microsoft by submitting it, but you do grant to Microsoft, in its capacity as your agent, or commissionaire, the worldwide right to: host, install, use, reproduce, publicly perform and display via any digital transmission technology, format, make available to customers (including through multiple tiers of distribution) [...] (Microsoft App Developer Agreement July 2020)

EULA:

- 5.3. [...] If You choose, You may include a separate end-user license agreement (EULA) in Your Product that will govern the user's rights to the Product, but, to the extent that EULA conflicts with this Agreement, this Agreement will supersede the EULA. (Google App Developer Agreement June 2020)
- 5h) You, not Microsoft, will license the right to install and use each App or In-App Product to Customers. You may provide a license agreement to the Customer for your App or In-App Product. [...] If you do not provide such materials, then the Standard Application License Terms will apply between you and Customers of your App or In-App Product, as applicable for the market(s) where your App or In-App Product is made available. If you provide your own license agreement, your license must, at a minimum, provide the Customer with App or In-App Product download, streaming, and usage rights that are no more restrictive than the download, streaming, and usage rights set forth in the Microsoft Usage Rules. (Microsoft App Developer Agreement July 2020)

Liability:

- 8.3 Google does not undertake an obligation to monitor the Products or their content. If Google becomes aware and determines in its sole discretion that a Product or any portion thereof: (a) violates any applicable law; (b) violates this Agreement, [...]; (c) violates terms of distribution agreement [...]; or (d) creates potential liability for, or may have an adverse impact on, Google or Authorized Providers [...]; then Google may reject, remove, suspend or limit the visibility of a Product on Google Play, or reclassify the Product from Google Play or from Devices. (Google App Developer Agreement June 2020)
- 3l) Removal Policies. Microsoft may remove or suspend the availability of any App or In-App Product from the Store for any reason. Reasons may include, without limitation, [...] (iii) an assertion or claim that your App or In-App Product infringes the intellectual property rights of a third party; [...] (Microsoft App Developer Agreement July 2020)

Warranties:

- 11.1 You represent and warrant that You have all Intellectual Property Rights in and to Your Product(s). (Google App Developer Agreement June 2020)
- 11.2 If You use third-party materials, You represent and warrant that You have the right to distribute the third-party material in the Product. (Google App Developer Agreement June 2020)
- 8c) Your App, App Assets, and In-App Product, together with all advertising or other materials accessible from or that provide access to your App, App Assets, and In-App Product complies with and will continue to comply with all requirements of this Agreement, including the Certification Requirements, as well as all applicable laws, regulations, and regulatory guidance; [...] (Microsoft App Developer Agreement July 2020)

Resources:

- <u>WIPO Handbook on Key Contracts for Mobile Applications a developer's</u> perspective
- Google App Developer Agreement July 2020
- <u>Microsoft App Developer Agreement July 2020</u>

5.2.3. Advantages and risks

Advantages	Risks
• App developer agreements or distribution agreements clearly determine the terms for an app to be distributed to end users. The app store is bound by these terms and app developers can invoke the rights set out in there	 Many of the terms included in app developer agreements are pre- defined by the app store.
• App store distribution agreements often allow app developers to choose their own EULA with end users or the standardized EULA they use.	• It is important to understand all terms and comply with them, as otherwise the app stores can remove the app without prior notification.
	 App developers should make sure to grant non-exclusive licenses to distribute the app in a particular market. That enables them to also offer the same app via a different

5.3. Open-source and Creative Commons licenses

If developers make their software available for others to use, modify and contribute to, and maintain, they can make use of open-source and Creative Commons licenses if they want to do so on a royalty-free basis. See Sections 3.3.1 and 3.3.3 for an introduction to such licenses. Here, we highlight the topics that app developers need to consider when they are the licensor.

app store.

5.3.1. Open-source licenses

Different open-source licenses impose different permissions, conditions and limitations. When choosing whether to use an open-source license and which license to use, there are several key considerations:

- Dependencies;
- How app developers want others to be able to use the software;
- Community standards;
- Licenses for contributions.

5.3.1.1. Dependencies

If an app developer used code made available with an open-source license, the license for the open-source software implemented in an app may impose an obligation on the app developer to ensure compliance with the applicable licenses when releasing the app that incorporates the code. These compliance obligations can be ascertained by carefully checking the conditions of the open-source license agreed to when using the open-source license. The simplest option is to use the same license as the original project.

5.3.1.2. How app developers want others to be able to use the software

App developers can choose between the different variations of open-source licenses. Generally, they fall within three main categories:

- **Permissions** establish what others can do with the work; they apply mainly to acts of distribution, commercial use, and adaptation.
- **Conditions** for the use of the work, which commonly include disclosure of the source, license and copyright notice, the use of the same license for works implementing the open-source content, documentation of changes.
- **Limitations** that protect the liability, warranty.

Some examples of open-source licenses:

- <u>EU Public License Model</u> (available in all EU languages)
- MIT License
- <u>Apache</u>

5.3.1.3. Community standards

When choosing an open-source license, an important consideration are the needs and expectations of the community or communities an app belongs to. If the mobile app contributes to or extends an existing open-source project, it may be easiest to use the same license (this may also be required for compliance reasons). If other projects in the same or related fields are using a particular license, keeping within this framework may be beneficial.

5.3.1.4. Licenses for contributions

Most open-source licenses serve as a license for both inbound (contributions from open-source community) and outbound (to contributors) material. If this is not the case, and developers want to incorporate open-source contributions to their software, an additional agreement can be used to obtain a license for these contributions.

Examples of contributor license agreements:

- Apache Individual Contributor License Agreement
- Eclipse Contributor Agreement

5.3.2. Creative Commons licenses

It is possible to make copyright-protected content available for others to use by using Creative Commons (CC) licenses (see Section 3.3.3). The decision to use a CC license can only be made by the right holder, and it is important to keep in mind that CC licenses are irrevocable. There is a Creative Commons tool and flowchart which enable app developers to determine which license is best suited to them, and the conditions under which they want to share their creative content. If a developer is uncertain about whether to use a Creative Commons license, or which license is best suited, it is advisable to consult an IP professional.

Applying a CC license to a work is straightforward and simply requires communicating the license chosen to people using the application. This can be done by including a statement in the "Information" or "IP" menus, such as "© 2020. This work is licensed under a CC BY-NC 4.0 License" and a link to the license, which can be found on the CC website.

5.3.3. Advantages and risks

Advantages	Risks
 If app developers want to license the software royalty-free, they can choose from well-known open- source licenses. 	• When granting software licenses, app developers need to make sure that they own the rights that they are licensing to third parties. This is particularly important when software has been used from open-source licenses.
 Open-source licenses can also be tailor-made. 	 Communities may expect the app to follow a particular license that other

- For other copyright-protected content, Creative Commons licenses provide well-known terms. The conditions are straightforward and users can easily inform themselves through the website's tools.
- Creative Commons licenses are irrevocable.

these may present a risk.

projects in the same or related fields are using as well. Deviating from

5.3.4. Resources

GitHub has a series of <u>Open-Source Guides</u> that address different aspects of using open-source licenses, including:

- Starting an Open-Source Project and
- The Legal Side of Open-Source.

GitHub's <u>Choose a License</u> site also provides guidance on selecting an open-source license suited to the app developer's needs.

The Creative Commons website has various resources, including:

- a license selection tool,
- a <u>flowchart</u> for selecting a CC license, and
- an extensive <u>FAQ</u> page.

5.3.5. Summary

Key points: open-source and Creative Commons licenses

- Open-source and Creative Commons licenses provide well-known terms and conditions for making software and copyright-protected content available to third parties on a royalty-free basis.
- It is important to ascertain the ongoing or forward licensing requirements of any licensed material being used in the app.
- App developers are well-advised to choose the conditions of a license that best suits their needs and wishes, as well as the relevant community standards.
- These conditions must be clearly communicated to the party using the protected content, either in the app menu and/or in the license agreement.
- When conditions are tailor-made, advice from a licensing professional is recommended.

6. ENFORCEMENT: TOOLS TO ENFORCE PROTECTION FOR MOBILE APPLICATIONS AND LICENSING AGREEMENTS

It may happen that the mobile app is copied by third parties or that content is extracted from the app without the right holder's consent. Also, licensees may not adhere to the terms of the license. Different tools are available to an app developer in the event of a possible IP infringement or of an infringement of contractual terms.

6.1. IP infringement

When third parties copy the mobile app or extract content from the mobile app, they may infringe an IP right, such as a copyright in the software, a design right in the GUI, a patent protecting the functionality or a trademark in a logo. In order to enforce one's IP rights, several tools are available. Before enforcement measures can be taken, it is recommended that legal advice be sought on several aspects of enforcement. This is necessary because enforcement tools differ from one country to another and certain steps may be required before starting an enforcement procedure.

Here, we discuss different enforcement tools of the main app stores Apple and Google, negotiations, administrative and judicial remedies available in several countries, and the risks and advantages related to them.

6.1.1. Notice-and-take-down procedures

Notice-and-take-down procedures are very cost-friendly measures for IP right holders who encounter infringing online content, such as in a mobile app. IP right holders can pursue this avenue by themselves, without legal representation. All major platforms set out the procedures on their websites. In essence, by following this procedure, the IP right holder asks the Internet platform to take down the infringing links on their platform. Generally, the following are required:

- proof of ownership of the IPR,
- links to infringing content, and
- proof of identity of the complaining company.

The procedure differs slightly according to the platform, but, after an IP infringement complaint is filed, the alleged infringer will generally be notified of the claims. He may submit counter-notifications to dispute the corresponding claims. The platform will in the end exercise discretion to pursue the take-down procedure.

In the event that the right holder does not agree with the final decision or that there are conflicting IP infringement claims, the judicial avenue may be the right tool to use. Starting an administrative or judicial procedure will also be necessary if a right holder seeks compensation.

Notice-and-take-down procedures of the major platforms:

- Apple App Store Content Dispute
- Google Report Illegal Content
- Microsoft
- Alibaba IP Protection Platform

Choosing the right enforcement measure depends on the measures available on the market and the type of company that is allegedly infringing the app developer's IP right. Measures adequate for small, innocent infringers may not be adequate for bigger companies who have been involved in IP infringement procedures before. The first step is therefore to gather information about the size of the company, its production capacity and main markets, and how long it has been on the market, etc. Information on companies is often available publicly via the relevant registries:

- Chinese local Administrations of Industry and Commerce (AICs)
- Indian Ministry of Corporate Affairs
- Brazil Junta Comercial of each Brazilian state
- EU: European Busines Registry Association
- US: National Corporation Directory

Furthermore, it is advisable to formalize your position as an IP right holder. While copyright is available automatically, it is advisable in certain countries to register copyright in order to prove ownership of the IP right when taking action against an infringement thereof. In the US for example, such registration provides a presumption of copyright validity before a court. In addition, it allows a right holder to request statutory damages and awards to cover attorney fees. Registration takes place at the relevant registry (e.g. US Copyright Office, Copyright Protection Center of China).

Another aspect is that of collecting evidence. In some countries, e.g. China, notarized proof of the infringement must be obtained from a Chinese notary public in order to use evidence of the infringement in an administrative or court procedure. Professional guidance on how to obtain notarized proof is recommended.

6.1.2. Negotiations

A cease-and-desist letter with regard to the infringement is often the first step to inform the alleged infringer that they are using IP rights without the consent of the right holder. It should include a reminder to stop using the IP rights. Important, however, is that all the evidence about the infringement has been secured before entering into negotiations with the alleged infringer, as they may want to eliminate any evidence thereof. Informing the alleged infringer about the fact that the evidence has been secured will also increase pressure on them to reach an agreement. It can also start the clock for securing other remedies. Reaching an agreement can result in a quicker and more tailor-made outcome, by for example transforming an infringer into a licensee. If negotiation is unsuccessful, an IP owner may need to avail him or herself of judicial or administrative remedies.

6.1.3. Administrative actions

Some countries allow right holders to address relevant administrative bodies, such as IP offices, to impose injunctions for certain types of IP infringements and to levy fines. For example, in China the local Administrations for Industry and Commerce (AICs) will act against trademark infringement cases and the Copyright Office against copyright cases, if they are provided with evidence about the existence and ownership of the right as well as evidence of the infringement. This can therefore be a relatively fast and cost-effective tool.

• Chinese local Administrations of Industry and Commerce (AICs)

6.1.4. Civil litigation

Judicial forms of enforcement require legal representation. Their effectiveness, length, complexity and costs depend on the enforcement systems and the particular situation. Generally, one can seek injunctions, damages or other adequate remedies from a civil court. Importantly, the civil court also issues provisional measures, such as interlocutory injunctions or preserving evidence. These constitute important tools to preserve the status quo at the time of the application.

In some countries, such as the UK, Anton Piller orders can be requested. These entail entering and inspecting premises in order to remove evidence. Such orders can be useful to gather the necessary evidence in order to obtain an interlocutory injunction. Another injunction available in several countries entails the freezing of the alleged infringer's bank accounts, which can later be used to pay for any damages awarded.

6.1.5. Criminal measures

In cases where trademark and copyright have been infringed on a large scale, criminal procedures can be carried out. Such proceedings are, however, instigated by the public prosecutor in the relevant jurisdiction. Possible remedies include imprisonment and/or penalties. They do not allow IP right holders to claim damages. Nevertheless, in cases of flagrant copyright or trademark infringements, it may be an adequate tool to create a deterrent for potential future infringers.

6.1.6. Advantages and risks

Each enforcement tool has advantages and risks. This table highlights the most relevant considerations.

Advantages

- Notice-and-take-down procedures are cost-effective because they allow right holders to represent themselves.
- Some countries such as China allow for relatively cheap and fast administrative actions for trademark and copyright infringements.
- Negotiating with the infringer can lead to quick and tailor-made outcomes, e.g. turning the infringer into a paying licensee.
- For trademark and copyright infringement on a large scale, most countries offer criminal measures that mainly serve as a deterrent for future infringers.

Risks

- Consolidating the legal position of the right holder, e.g. by registering copyright in certain countries.
- Preserving evidence, in certain countries through notaries.
- Bureaucratic delays and backlog of cases in civil procedures in some countries.
- Choice of procedure should also take account of the remedies available. Notice-and-take-down procedures, for example, do not allow for claiming damages.
- Making a significant impact on IP enforcement in certain countries can be costly in cases where those who engage in IP infringements are primarily small players.

6.1.7. Summary

Right holders who encounter infringements of their IP rights and want to enforce their rights should consider the following:



6.1.8. Resources

China IPR SME Helpdesk, Enforcement of Intellectual Property Rights in China

GOV.UK, India IP Rights, Intellectual Property Rights in India

6.2. Infringement of contractual terms

When mobile app producers conclude agreements with licensees or the platform, these other parties may not respect the rights and obligations set out in these agreements. App developers may then want to take measures against such infringing behavior. The advantage of agreements is that the parties can agree on a common procedure they want to follow in case of disputes (dispute-resolution clauses). Here, we discuss the various tools regarding dispute-settlement procedures, competent forums, applicable law, and associated risks and benefits.

6.2.1. Dispute-resolution procedures

There are several options to resolve disputes, such as judicial procedures, arbitration, mediation or expert determination, among others. The first form of dispute resolution entails judicial procedure via civil courts in a particular country. Bringing a claim to a competent court initiates normal judicial procedures, with the aim of having a judge hear and decide upon the claims presented. The stages usually involve written submissions and an oral hearing. Which provisional measures, remedies or procedural actions are available depend on the law of the country where the claims are brought. Delays or other deficiencies of the system may be more of a problem in one country than in others. Choosing judicial procedure therefore depends highly on the legal system in which the claims would be brought.

There are also alternative dispute-resolution (ADR) procedures¹⁸. In particular, arbitration, mediation and expert determination are popular mechanisms for resolving disputes. These options require the parties to agree in an agreement, or later, to submit disputes to one of these mechanisms. In the case of arbitration, for example, the dispute will be submitted to one or three arbitrators, often following the rules of an arbitration institution. While such a procedure is less formal than a judicial one, it still shares the stages of written submissions and oral hearing, in which witnesses and possibly expert statements can be discussed and questions can be asked. Importantly, arbitrational awards are final and can be enforced internationally rather easily, due to the widely accepted New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards.

A softer form of dispute resolution, and possibly the first step before seeking other means, is mediation. If the parties agree to this form of dispute settlement, a neutral mediator will assist them in resolving the dispute. The character of this dispute-resolution form remains voluntary, as the parties can stop at any stage during the process. If parties reach an agreement, the settlement will be in the form of a contract between the parties.¹⁹

¹⁸ WIPO provides ADR services through its Arbitration and Mediation Center: www.wipo.int/amc.

¹⁹ See "WIPO Guide on ADR for mobile application disputes, 2020" for further guidance.

6.2.2. Jurisdiction

The choice of the court in a country to which the dispute should be brought is important for cross-border situations.

When the parties come from different countries, the courts of both countries can be competent. An agreement can set out which courts should be competent in case of conflicts. When declaring certain courts competent, several factors should be taken into consideration:

- The legal costs of one court system over another (court fees, translation costs, attorney fees);
- How courts have interpreted the most crucial aspects of the relationship the agreement in question and how that interpretation can affect each party.
- Delays or other deficiencies associated with a particular judicial system, like corruption or unfamiliarity with agreements like the one at issue;
- Choosing the country of residence/establishment of the defendant as the factor to determine competence of courts may limit the risks associated with enforcement a judgment.

In certain other situations, the competent court is set by law: for the registration or validity of IP rights, the courts of the State in which IP rights have been registered have exclusive jurisdiction in proceedings.

6.2.3. Choice of law

Particularly for cross-border situations (e.g. the availability of the mobile app in several countries), parties are well-advised to determine which law shall be applicable in the event of a conflict regarding the agreement. This could be the law of either of the parties, the law of the country where most activities under the contract are carried out, the law of a neutral country which has experience in the sector or the law of the party against whom claims are being brought. The latter may act as a deterrent to enter formal dispute resolution, while the law of a neutral country brings equal costs and unfamiliarity with the system for both parties.

Some countries have particular stipulations, such as China, where it is mandatory to make Chinese law the applicable law in disputes relating to the protection of IP rights in China. Should a different law be chosen, the consequence may be that this clause or the entire contract will be declared void. Disputes on the performance and interpretation of the contract can, however, in general be governed by non-Chinese law.

6.2.4. Example dispute-resolution clauses

We provide some example clauses that can be used to determine the dispute settlement procedure, jurisdiction and applicable law. These are a few examples:

- "This Agreement shall be construed and interpreted by the laws of [choose the applicable law]. The court of [choose the jurisdiction to settle disputes] shall have jurisdiction."
- "This Agreement is governed by, and is to be construed in accordance with, [choose the applicable law] law. The [choose the jurisdiction to settle disputes] Courts will have non-exclusive jurisdiction to deal with any dispute which has arisen or may arise out of, or in connection with, this Agreement."
- "The Parties agree to submit all their disputes arising out of or in connection with this Agreement to the exclusive competence of the courts of [choose City (Country)], and they waive any other jurisdiction to which they may be entitled."

There are model clauses for WIPO ADR procedures as well as for combinations of these procedures.²⁰ The use of model clauses is encouraged to ensure that the important elements of a dispute resolution clause are provided for and to avoid any ambiguity which may later lead to difficulties and delays in the dispute resolution process. This is an example of a frequently-used combined clause:

"WIPO Mediation Followed, in the Absence of a Settlement, by [Expedited] Arbitration Clause

Any dispute, controversy or claim arising under, out of or relating to this contract and any subsequent amendments of this contract, including, without limitation, its formation, validity, binding effect, interpretation, performance, breach or termination, as well as noncontractual claims, shall be submitted to mediation in accordance with the WIPO Mediation Rules. The place of mediation shall be [specify place]. The language to be used in the mediation shall be [specify language].

If, and to the extent that, any such dispute, controversy or claim has not been settled pursuant to the mediation within [60][90] days of the commencement of the mediation, it shall, upon the filing of a Request for Arbitration by either party, be referred to and finally determined by arbitration in accordance with the WIPO [Expedited] Arbitration Rules. Alternatively, if, before the expiration of the said period of [60][90] days, either party fails to participate or to continue to participate in the mediation, the dispute, controversy or claim shall, upon the filing of a Request for Arbitration by the other party, be referred to and finally determined by arbitration in accordance with the WIPO [Expedited] Arbitration Rules. [The arbitral tribunal shall consist of [a sole arbitrator] [three arbitrators].] * The place of arbitration shall be [specify place]. The language to be used in the arbitral proceedings shall be [specify language]. The dispute, controversy or claim referred

²⁰ WIPO ADR model clauses are available at: <u>https://www.wipo.int/amc/en/clauses/</u>.

to arbitration shall be decided in accordance with the law of [specify jurisdiction]. (* The WIPO Expedited Arbitration Rules provide that the arbitral tribunal shall consist of a sole arbitrator.)"

The <u>WIPO Clause Generator</u> is a useful tool to draft mediation and arbitration dispute resolution clauses.

6.2.5. Advantages and risks

Each procedure and choice of jurisdiction and law has its own advantages and risks. We highlight the most relevant considerations here:

Advantages	Risks
 Arbitration and mediation often avoid unforeseeable costs of litigation. 	• The judicial procedure entails higher costs, including attorney fees, court costs, expenses for witnesses. Parties should determine which party pays for these costs, i.e. the losing party.
• Arbitration and mediation often allow for a quicker settlement of conflicts. This is particularly so where the settlement of intellectual property disputed in several countries can be addressed by the same arbitration panel.	 Obtaining a final judgment may take a long time in certain judicial systems.
 Arbitration and mediation allow for confidentiality of proceedings, which is more difficult to achieve in a judicial procedure. In general, parties have comparatively more autonomy to devise the procedure to their needs. 	 The choice of law may be restricted in some countries regarding IP infringements.
 Arbitration awards can be enforced internationally rather easily. 	 When not choosing the jurisdiction of the defendant, the enforcement of the judgment may be more difficult, especially in cross-border disputes.
 The higher costs involved in the judicial procedure may act as a deterrent against lawsuits. 	• Arbitral awards normally are final. While for many this constitutes an advantage, it also presents a risk as there is no possibility to appeal the outcome of the procedure.

6.2.6. Summary

Key points

- Determine what the main purpose of dispute resolution is for the parties: obtaining an enforceable decision, preserving the relationship between parties, maintaining the confidentiality of proceedings, low legal costs, expeditious proceeding, expertise of the neutral deciding or helping the parties to solve the dispute, others.
- Seek legal advice regarding the specificities of relevant jurisdictions and laws when choosing the jurisdiction and applicable law.
- When determining the jurisdiction in which disputes should be brought, the enforceability of the judgment should be considered, especially in cross-border disputes

6.2.7. Resources

WIPO Clause Generator

WIPO Distance Learning Course on "Arbitration and Mediation Procedure under the WIPO Rules DL-317"

The UK Intellectual Property Office, Example One-way Non-Disclosure Agreement

IPR Helpdesk One Way Non-Disclosure Agreement

European IPR Helpdesk, Your Guide to IP and Contracts

7. RESOURCES

China IPR SME Helpdesk, Enforcement of Intellectual Property Rights in China

China IPR SME Helpdesk, Guide to Understanding and Using China's Design Patent

China IPR SME Helpdesk, Guide to Using Contracts

Creative Commons, Licensing Conditions

Dusollier, S. (2010), <u>Scoping Study on Copyright and Related Rights and the Public</u> <u>Domain</u> (WIPO)

European Patent Office, Espacenet

EPO, Overview of the Patent Grant Process

EU Intellectual Property Office, eSearch Plus

European IPR Helpdesk, <u>Fact Sheet: Commercialising Intellectual Property: Licence</u> <u>Agreements</u>

European IPR Helpdesk, Factsheet on Trade Secrets

European IPR Helpdesk, One Way Non-Disclosure Agreement

European IPR Helpdesk, Your Guide to IP and Contracts

GitHub, Open Source Guides

Open Source Initiative, Open Source Licenses by Category

Linux Foundation, Open Compliance Program

Shemtov, N. (2018), Intellectual Property and Mobile Applications (WIPO)

UK Intellectual Property Office, Example One-way Non-Disclosure Agreement

UK IPO, Intellectual property rights in India

UK IPO, Licensing Intellectual Property

United States Patent and Trademark Office, Design Patent Application Guide

USPTO, Nonprovisional (Utility) Patent Application Filing Guide

USPTO, Patent Database

IP TOOLBOX FOR MOBILE APP DEVELOPERS

WIPO Distance Learning Course on "<u>Arbitration and Mediation Procedure under the</u> <u>WIPO Rules DL-317</u>"

WIPO Global Brand Database

WIPO Handbook on Key Contracts for Mobile Applications - a developer's perspective

WIPO, Distance Learning Course on "Software licensing including open source (DL-511)"

WIPO, Global Design Database

WIPO, <u>Hague Express</u>

WIPO, Inventing the Future: An Introduction to Patents for Small and Medium-sized Enterprises

- WIPO, IP Panorama, Trademark Licensing Learning Points
- WIPO, Madrid System
- WIPO, Multiparty confidentiality agreement
- WIPO, Patent scope
- WIPO, PCT Applicant's Guide, PCT FAQs
- WIPO, Successful Technology Licensing

WIPO, <u>The Hague System of the International Registration of Industrial Designs: Main</u> <u>Features and Advantages</u>

WIPO, WIPO Clause Generator

WIPO, WIPO Lex Database Search

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