

Copyright Management of User Generated Video for Journalistic Reuse ^{*}

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Abstract. To review the copyright scope of the reuse for journalistic purposes of User Generated Videos, usually found in social media, the starting point is the analysis of current practices in the news industry. Based on this analysis, we provide a set of recommendations for social media reuse under copyright law and social networks' terms of use. Moreover, we describe how these recommendations have been used to guide the development of the InVID Rights Management module, focusing on EU copyright law given the context of the project and the involved partners.

Keywords: Copyright · User Generated Video · Licensing.

1 Introduction

Whilst technology is moving fast and creating new possibilities every single day, the law is far from following quickly and addressing these high-speed changes. Never in human history has law been so far from the reality it tries to regulate [8]. This is especially true when referring to copyright legislation.

Copyright has its origins in printed copies of texts, where printers found the first protection of their business through the grant of an exclusive license to print (the “right to copy”): it was back in the 18th century when the legislators granted them a time-limited privilege to print. A new industry boomed allowing new actors to benefit from the generated revenues. Not only the printer who had made an investment obtained a return through the monopoly it had been granted but also authors began to have a reward for their creative effort.

^{*} Supported by InVID project.

Copyright evolved, following industrial developments and inventions, covering more objects (graphic prints, films, performances, etc.) and more beneficiaries (photographers, directors, musicians,...). Laws developed nationally, following two main systems: the Anglo-Saxon model and the Continental approach. In the first model, works are conceived as the authors' creations from which they benefit economically. In the Continental model, in addition to economic exploitation rights, moral rights are vested in the authors. These rights cannot be waived, are perpetual and legally protected.

Copyright always refers to material objects: the idea of the author is not conceivable or understood (and therefore not protected) unless it is materialized in a physical object (a writ, a painting, a picture, a film,...) and exploitation is not possible unless limited copies or representations of such first fixations of the work are made (a book, a poster, a music-record, a film registration,...).

But the current and ongoing technological revolution, which began at the end of the 20th century has brought mainly two dramatic changes to this copyright system: first, the unlimited possibility for any person (not only industries) to access and make identical copies of any existing work protected under copyright at any time; second, the dilution of territorial borders.

Both changes undermine current copyright legislation grounds. National legislation cannot afford a global market and traditional copyright categories, such as rights definitions or copyright exceptions, do no longer fit in the ongoing revolution.

While legislators seek to build an adapted legislative corpus to deal with this new reality (because it is still agreed that copyright is the main incentive to encourage creation, reward creators and industries that allow their works to reach the public and allow humanity to boom and progress), many technological companies like Google or Twitter have started building their own private regulations mainly in the form of Terms and Conditions that apply to the services they provide to the Information Society we are in.

Therefore, and in general terms, the first assumption to make before we start any legal analysis is to recognise that we have a totally non-adapted legal framework that is being permanently questioned and that is under an ongoing discussion and revision.

In this legal context, we focus our analysis on the news industry use of copyrighted content contributed by users of social networks like YouTube, Twitter and Facebook. This kind of content contributed by users, usually not professional creators, is called User Generated Content (UGC). In the case of multimedia content, User Generated Video (UGV).

Nowadays, more and more news media are feeding their channels with eyewitness UGV that are uploaded to social networks. Since news media do not always directly know the owners, creators and/or uploaders of these contents, they need to find ways to ensure two very important things: first, verification of contents; second, clearance of rights so that exploitation of UGV is made without legal risks.

Clearance of rights needs to be made mainly in the context of breaking news needs. Therefore, this should be done in the shortest time-frame possible, since events are or need to be reported as they happen. Therefore, the objective is to study if there is a legal coverage that allows an EU-wide platform to provide (1) legal treatment of UGV for verification purposes and (2) legal use of UGV.

The rest of this chapter is organised as follows. This section continues with an overview of the applicable law from the point of view of the reuse of digital social media content from social networks, focusing on copyright law. Though a general overview is provided, the focus is placed on regulations at the European level because it is from where InVID platform services will be mainly offered.

Then, an overview of current practices regarding the reuse of User Generated Video (UGV) by the news industry is provided. To better define the scope under consideration, a survey about current practices in the news industry when reusing social media has been conducted.

The survey, as well as desk research and internal discussions among consortium participants, has helped prioritise the social networks to target and the kind of copyright agreements required to clear the most common kinds of content and reuses. Based on the main sources of UGV identified, YouTube, Twitter and Facebook, their terms of services have been also analysed.

To conclude this chapter, a set of closing remarks and guidelines for the future development of InVID regarding rights management are presented.

1.1 Copyright

There is not an EU-wide copyright law that ensures a unique and common treatment of copyright in the whole EU territory. Instead, the EU has as many copyright legislations as Member States. Territoriality, as a basic principle of copyright protection, entails that copyright and related rights to copyright are conferred by national laws and enforced within the limit of each state. The object, definition and scope of copyright vary in each jurisdiction.

The need to establish a European internal market, as well as systems that ensure that competition is not distorted within it, has brought the European legislator to enact several directives on copyright. These directives set harmonised standards that reduce national discrepancies in specific aspects focused by each directive, but they need to be transposed into national legislation in order to be applied. This means that each state introduces the directive adapting it to its internal legislation but with some freedom to phrase it and to adopt standards in different degrees. One result is that differences between jurisdictions do exist and do not guarantee a common treatment of copyright issues within the EU⁵.

⁵ The main European Union Directives include:

- Directive on the harmonisation of certain aspects of copyright and related rights in the information society (“InfoSoc Directive”), 22 May 2001. Available from http://ec.europa.eu/internal_market/copyright/copyright-infso/index_en.htm

However, all European countries have signed all relevant World Intellectual Property Organization (WIPO) Treaties⁶. Consequently, international standards and definitions have been introduced in their jurisdictions, which allows a common understanding of basic copyright concepts. According to this, some important concepts to understand copyright in the context of InVID are presented in the following subsections.

Subject-Matter of Copyright Copyright extends to both:

- Works⁷ understood as the product of human creativity embodied in a material form (that is, expressed); it includes cinematographic works to which works expressed by a process analogous to cinematography are assimilated; and,
 - Other subject-matter understood as rights protecting not works but investments made by other agents than authors (publishers, producers, etc.) helping them to make their works available to the public (books, films, music
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- Directive on the enforcement of intellectual property rights (“IPRED”), 29 April 2004. Available from http://ec.europa.eu/growth/industry/intellectual-property/enforcement/index_en.htm
 - Directive on the legal protection of databases (“Database Directive”), 11 March 1996. Available from http://ec.europa.eu/internal_market/copyright/prot-databases/index_en.htm
 - Directive on the term of protection of copyright and certain related rights amending the previous 2006 Directive (“Term Directive”), 27 September 2011. Available from: http://ec.europa.eu/internal_market/copyright/term-protection/index_en.htm
 - Directive on certain permitted uses of orphan works (“Orphan Works Directive”), 25 October 2012. Available from http://ec.europa.eu/internal_market/copyright/orphan_works/index_en.htm

⁶ Including the following:

- The Berne Convention for the Protection of Literary and Artistic Works (1886).
- The Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations (1961).
- The Copyright Treaty, Geneva (1996), which was signed directly by the EU.

⁷ Art. 2 Berne Convention: (1) The expression “literary and artistic works” shall include every production in the literary, scientific and artistic domain, whatever may be the mode or form of its expression, such as books, pamphlets and other writings; lectures, addresses, sermons and other works of the same nature; dramatic or dramatic-musical works; choreographic works and entertainments in dumb show; musical compositions with or without words; cinematographic works to which are assimilated works expressed by a process analogous to cinematography; works of drawing, painting, architecture, sculpture, engraving and lithography; photographic works to which are assimilated works expressed by a process analogous to photography; works of applied art; illustrations, maps, plans, sketches and three-dimensional works relative to geography, topography, architecture or science.

records, etc.); it includes rights granted to audiovisual producers for the investment made on audiovisual recordings of works but also of any succession of images with or without sound (which are considered as films⁸).

For InVID, this means that a UGV is always qualified for copyright protection: UGV will be a work if sufficiently creative or a subject-matter of copyright if not. Why does this matter? The difference is important because (1) only works benefit from moral rights; (2) copyright protection for works is longer than for other subject-matters of copyright.

The survey presented in Section 2.2 shows that most UGVs are “simple recording of facts” so they should be treated as other subject-matters of copyright, where moral rights will not apply per se. However, those UGVs constituting video reports/stories or documentaries qualify as works as a creative effort has been made by the author, so moral rights will apply.

Ownership Copyright on works or other subject-matter is exclusively owned by:

- The author that created the work, from the sole fact of the creation.
- The person (natural or legal) that made an investment in any of the other subject-matters of copyright (for videos, the person recording it).

This ownership is exclusive and vests on the original owner all rights that the copyright law grants (economic rights and moral rights if applicable). This means that UGV creator (whether author or producer) has the monopoly of copyright in it. It is important to stress that the person who shot the video, by pressing the record button of the device (mobile phone or camera), is the creator of the UGV. This should be taken into account when contacting the user that uploaded the video because he might not be the content owner if he did not shoot it. This is even so when the owner of a device lends it to someone who then shoots a video, as described by Dubberley in his journalist’s guide to copyright law and eyewitness media [2]. The guide illustrates this fact in page 13 with the case of a photograph of Ben Innes with the hijacker of his flight shot by a member of the cabin crew. “The reality is, the copyright of the image of Innes with Seif Eldin Mustafa belongs to the cabin crew member who took the shot, not Innes”.

The creator will be the only person/entity allowed to directly exploit, on an exclusive basis, the video. One mean of exploitation is by transferring or licensing economic rights on the video to third parties. Such transfer or license will allow the third party benefiting from it to exploit the video within the limits of the transfer or license: the third party’s rights on the video will have the exact scope of the transferred or licensed rights.

The main conditions that will determine such scope are: exclusivity or non-exclusivity; economic rights included; duration; authorised modalities and means

⁸ Art. 3 Directive 2006/116/EC “(...) The term ‘film’ shall designate a cinematographic or audiovisual work or moving images, whether or not accompanied by sound”.

of exploitation; territories. A legal use of a video under a license will be the use that complies with all and each of its conditions.

The survey in Section 2.2 shows that some UGVs are commissioned videos. The commission of a video means it has been recorded under a contractual agreement (including also verbal agreements) that may include a transfer or license of rights (the extent of which will depend on the agreement with the recorder of the video). In these cases, it may be that the creator of the video (the person pressing the button) is not the owner of its economic rights because the creator has worked for a media company under an agreement that directly assigns copyright to the media organisation (such assignment being as wide as the scope of the agreement).

Videos uploaded to any platform under a Creative Commons (CC) license are videos that already carry a license. This means the creator is uploading the video under some very particular conditions for third parties to reuse it: the specific conditions of the Creative Commons license s/he has chosen for it. A legal use of a UGV under a CC license is the use that respects all and each of the conditions of the CC license.

Extent of Rights Copyright is a set of rights that include, mainly:

- Moral rights⁹: when a human creation qualifies as a work, the author has a set of personal rights s/he cannot waive such as paternity (the right to be mentioned as the author) and integrity (the right to oppose to modifications prejudicial to the author’s honour or reputation). Such rights cannot be waived, are perpetual in some jurisdictions and remain with the author even if s/he transfers his economic rights to a third party. This means s/he can enforce moral rights on his works (that is, issue proceedings if s/he detects any violation of such) even though s/he may not have any economic right on them.

⁹ Moral rights are not harmonised at the EU level but have a minimum common definition under art. 6bis of WIPO Rome Treaty:

“(1) Independently of the author’s economic rights, and even after the transfer of the said rights, the author shall have the right to claim authorship of the work and to object to any distortion, mutilation or other modification of, or other derogatory action in relation to, the said work, which would be prejudicial to his honor or reputation.

(2) The rights granted to the author in accordance with the preceding paragraph shall, after his death, be maintained, at least until the expiry of the economic rights, and shall be exercisable by the persons or institutions authorized by the legislation of the country where protection is claimed. However, those countries whose legislation, at the moment of their ratification of or accession to this Act, does not provide for the protection after the death of the author of all the rights set out in the preceding paragraph may provide that some of these rights may, after his death, cease to be maintained.

(3) The means of redress for safeguarding the rights granted by this Article shall be governed by the legislation of the country where protection is claimed.”

- Economic rights: benefit both authors and other rights holders (they are then generically referred to as "neighbouring" or "related" rights). They cover acts of exploitation of works and other subject-matters of copyright. Relevant rights for the digital market, according to the InfoSoc Directive (art. 2 and 3) are:
 - The reproduction right as: "the right to authorise or prohibit direct or indirect, temporary or permanent reproduction of a work or other subject-matter by any means and in any form, in whole or in part: a) for authors, of their works; (...) d) for the producers of the first fixations of films, in respect of the original and copies of their films".
 - The communication to the public right (including, for authors, the right to make the work available to the public) as: "1. (...) the exclusive right to authorise or prohibit any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public may access them from a place and at a time individually chosen by them. (...) 2. (...) the exclusive right to authorise or prohibit the making available to the public, by wire or wireless means, in such a way that members of the public may access them from a place and at a time individually chosen by them: (...) (c) for the producers of the first fixations of films, of the original and copies of their films."
- Other Directives set compensation rights (when uses by third parties are made under legal exceptions or when exploitation cannot be individually authorised by the author). Primary rights will be managed by the rights holder directly or through his agents; compensation rights will mostly be managed by collective copyright societies.

For InVID, and considering that (1) eyewitness recordings of facts may not always qualify as a work but will always qualify as an audiovisual recording with neighbouring rights and (2) the acts of exploitation involve reproduction and public communication of the work or audiovisual recording, this means that UGV will always need copyright clearance with the author or rights holder.

Duration Copyright is limited in time; although terms have been harmonized under the Directive 93/98/EEC, later replaced by Directive 2006/116/EC of the European Parliament and of the Council of 12 December 2006 on the term of protection of copyright and certain related rights, national legislations may still apply in their territories longer term for some works because of transitional provision periods in the adoption of the Directive.

- For works: copyright protection lasts for the lifetime of the author plus 70 years, though there are some special provisions such as with co-authorship works. In this case, the period starts running upon the death of the last of the co-authors)¹⁰. After this period, works enter the public domain and can be freely exploited provided moral rights on the work are respected.

¹⁰ Art. 1 Directive 2006/116/EC: "1. The rights of an author of a literary or artistic work within the meaning of Article 2 of the Berne Convention shall run for the life

- For audiovisual recordings: related rights protection lasts for 50 years from the moment the recording was made or was first published¹¹. After this period, recordings enter the public domain and can be freely exploited.

Considering the reuse of eyewitness recordings of current facts for breaking news, they will rarely exceed the above mentioned periods and will not be in the public domain. Consequently, reuses of UGVs from the duration perspective will always require authorisation from the copyright holder.

Exceptions There is not any “fair use” provision in the EU that would give users the possibility to copy any copyright protected works or other subject-matters of copyright for limited and transformative purposes such as comment upon, criticism or parody as a defence for copyright infringement claims as it does exist in the United States.

Instead of that, the EU copyright framework works with limits and exceptions to copyright. Such limits and exceptions search a balance between the exclusive rights of authors and rights holders and other fundamental rights vested in other individuals that enter into conflict with copyright when these individuals are users of copyright-protected works or other subject-matters of copyright. Because authors’ rights are also human rights, any exception or limit to them is of strict interpretation.

The Directive on the harmonization of certain aspects of copyright and related rights in the information society (the so-called InfoSoc Directive), of 22 May 2001 harmonized the right of reproduction, the right of communication to the public, the right of making available to the public and the distribution right [3], with the effort to provide the rights holders with a high level of protection: the scope of exclusive rights was very broadly defined and adapted to the online environment. The Directive also introduced, in Article 5¹², an exhaustive list of exceptions to copyright protection to allow for certain, specific activities that pertain to scientific research, the activities of libraries, and to disabled people. This list includes one mandatory exception, Exception 5.1, and twenty optional exceptions, Exceptions 5.2(a-o), as shown in Fig. 1. Member States’ ability to introduce exceptions or extend the scope of any existing ones in their legislations is limited by the Directive’s list.

of the author and for 70 years after his death, irrespective of the date when the work is lawfully made available to the public.

¹¹ Art. 3 Directive 2006/116/EC: “The rights of producers of the first fixation of a film shall expire 50 years after the fixation is made. However, if the film is lawfully published or lawfully communicated to the public during this period, the rights shall expire 50 years from the date of the first such publication or the first such communication to the public, whichever is the earlier.”

¹² Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society <http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX\%3A32001L0029>

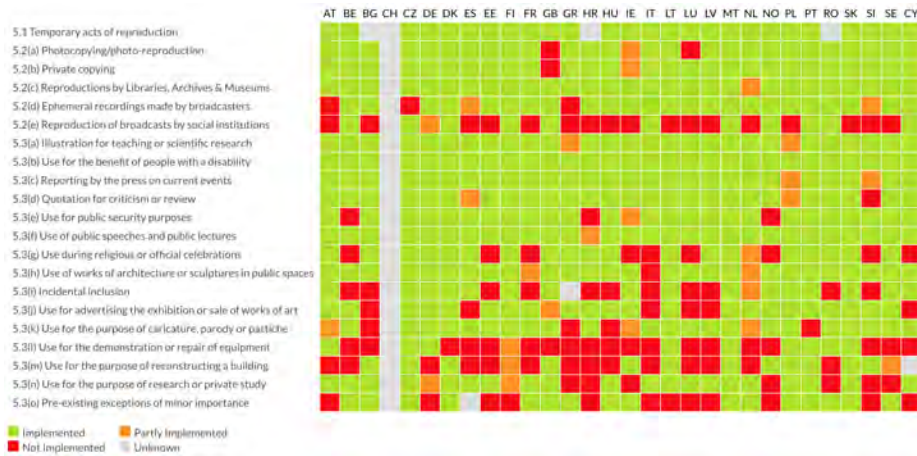


Fig. 1. Copyright exceptions in the European Union and their implementation status in the corresponding countries. (Source: <http://copyrightexceptions.eu>)

According to paragraph 5 of Art. 5, all of these exceptions and limitations “shall only be applied in certain special cases which do not conflict with a normal exploitation of the work or other subject-matter and do not unreasonably prejudice the legitimate interests of the rights holder” introducing here the Berne Convention “three steps test”¹³.

Linking The act of linking (including hyperlinking, deep linking, framing and embedding) refers to the act where no reproduction of works is made but the access to a work originally posted anywhere in the net is provided through an own page or site. According to a recent Court of Justice of the European Union ruling¹⁴, linking does not infringe copyright provided several conditions are met:

1. The linked work has legally been made available online with the consent of the rights holder.
2. No protection measures are circumvented, so the work is not communicated to any new public.
3. Persons acting for profit when publishing links should carry out the necessary checks to ensure that the work linked to is not illegally published.
4. Persons acting not for profit and publishing links to works made available cannot reasonably know that the work has been published without consent.

¹³ Art. 9 Berne Convention: “(2) It shall be a matter for legislation in the countries of the Union to permit the reproduction of such works in certain special cases, provided that such reproduction does not conflict with a normal exploitation of the work and does not unreasonably prejudice the legitimate interests of the author. (3) Any sound or visual recording shall be considered as a reproduction for the purposes of this Convention.”

¹⁴ See: Svensson case (C466/12); BestWater case (C-348/13); Sanoma case (C-160/15).

Orphan Works These are works or phonograms protected by copyright in which no rights holders are identified or, even if one or more of them is identified, none is located despite a diligent search for them has been carried out (according to article 2.1 of the Directive 2012/28/EU). In this cases, this regulation authorises certain reuses of the content without requiring prior authorisation, as detailed in Annex A. However, InVID cannot benefit from this special permission because it is not one of the kinds of organisations enjoying it: public libraries, museums, educational establishments, archives, film or audio heritage institutions or public service broadcasters.

1.2 Relevant e-Commerce Legislation

Since InVID is an online service, it also needs to take into account e-Commerce legislation: The overall goal of the EU harmonization efforts is to enable copyright-protected goods (e.g. films, software etc.) and services (e.g. services offering access to these goods and or providing verification of these works) to move freely within the internal market.

Directive 2000/31/EC on electronic commerce created the basic legal framework for online services, including electronic commerce in the Internal Market. The Directive removes obstacles to cross-border online services in the European Union and provides legal certainty to business and citizens alike. It establishes harmonized rules on issues such as the transparency and information requirements for online service providers, commercial communications, electronic contracts and limitations of liability of intermediary service providers.

The proper functioning of the Internal Market in electronic commerce is ensured by the Internal Market clause, which means that information society services are, in principle, subject to the law of the Member State in which the service provider is established. In turn, the Member State in which the information society service is received cannot restrict incoming services.

An intermediary service provider is an organisation that provides services for accessing, using or participating in the Internet; they may be organised in various forms, such as commercial, non-profit; privately owned, community owned. These services include also services provided free of charge to the recipient and funded, for example, by advertising or sponsorship.

In what may be of interest for the InVID project, it shall be pointed out that intermediary service providers storing information provided by the recipient of the service shall not be held responsible for contents uploaded by users in their platforms as long as:

1. It does not have knowledge of illegal activity or information and is not aware of facts or circumstances from which illegality is apparent;
2. Upon obtaining such knowledge or awareness, it acts expeditiously to remove or disable access to the information.

Therefore, if InVID provides tools for users to verify and license this content but does not upload content itself, it might be in a safer position regarding responsibility for possible infringing material uploaded by its users.

1.3 Future EU-Copyright Developments

At present, the proposed Directive on Copyright in the Digital Single Market 2016/0280 (COD) has been approved by the EU Parliament and the trilogue negotiations have begun, their conclusion being expected for early 2019. Recital 3 of the proposed Directive clearly points out that *“legal uncertainty remains, for both rights holders and users, as regards certain uses, including cross-border uses, of works and other subject-matter in the digital environment (...) there is a need to adapt and supplement the current EU copyright framework. This Directive provides for rules to adapt certain exceptions and limitations to digital and cross-border environments, as well as measures to facilitate certain licensing practices as regards the dissemination of out-of-commerce works and the online availability of audiovisual works on video-on-demand platforms with a view to ensuring wider access to content. In order to achieve a well-functioning and fair marketplace for copyright, there should also be rules on the exercise and enforcement of the use of works and other subject-matter on online service providers platforms and on the transparency of authors’ and performers’ contracts and of the accounting linked with the exploitation of protected works in accordance with those contracts”*¹⁵.

In what may be of interest for the InVID project, the Directive addresses the liability of platforms (ISP) storing and giving access to large amounts of works uploaded by users for copyright infringements arising from such UGC (art. 13); therefore, it imposes new obligations for these ISP, such as the obligation to conclude agreements with rights holders in order to use their works and the obligation to cooperate in good faith with right holders to ensure unlawful content is not made available in the platforms. Some platforms have been excluded from this obligation such as those providing non-commercial services, small-sized enterprises (less than 50 employees, and a turnover below 10 million euros) and microenterprises (less than 10 employees and a turnover below 2 million euros).

The Directive also includes a text and data mining mandatory exception in the field of scientific research (art. 3), thus allowing scientists to analyse big corpora of text and data of materials that are lawfully accessible with the legal certainty that this activity does not amount to copyright infringement. The exception only benefits a limited group of beneficiaries (“research organisations”: universities, research institutes or organisations conducting scientific research as their primary goal, on a non-profit basis or pursuant to a public interest mission recognized by a Member State) which entails that those that do not fall into the group will require rights holders’ authorization before they engage in text and data mining activities.

The changes introduced by the Directive will not significantly change the way InVID deals with copyright. In any case, their evolution will be monitored as stated in the conclusions and future work section, Section 4.

¹⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016PC0593>

2 State of the Art

2.1 Review of Current Practices in the Media Industry

In April 2014, the Tow Center for Digital Journalism published a report on amateur footage¹⁶ showing that, while “UGC is used by news organisations daily”, mainly “when another imagery is not available”, “news organisations are poor at acknowledging when they are using UGC and worse at crediting the individuals responsible for capturing it”.

The key findings of the content analysis undertaken in 2013 for that report showed that as much as “72 per cent of UGC was not labelled or described as UGC” and “just 16 per cent of UGC on TV had an onscreen credit”. The same report outlined that these “troubling practices exist across both television and web platforms”.

The authors, Claire Wardle, Sam Dubberley and Pete Brown, wrote that many of the 64 interviews conducted for their research with news managers, editors, and journalists from 38 news organisations based in 24 countries around the world, “used the term ‘Wild West’ to describe the current landscape”.

“Most journalists, however, now know that copyrights exist with uploaders even after they share it on a social network and understand the need to seek specific permission to use someone’s content. Still, there’s a difference between what people know and what people do”, this report explains.

“Certainly the pressure of rolling news means that there are more situations on 24-hour news channels where a senior editor will make the decision to run with pictures without securing permission (knowing they will ‘sort it out’ retrospectively if necessary) than on daily bulletin programs. Broadcasters working outside the pressures of rolling news explained that obtaining permission from an uploader was mandatory before using the content.”

In InVID, we have been constantly analysing breaking news events (and their corresponding videos) to update our use cases and requirements as well as to keep up with new developments in online video usage.

During the Brussels bombings of March 22nd 2016, the video¹⁷ corresponding to the frame shown in Figure 2 was taken by a witness from the airport parking lot.

This video was then shared with the Flemish publication Joods Actueel and through the WhatsApp mobile app where Anna Aronheim, then a defence correspondent for the Israeli 24 hour news television channel i24news.tv, picked it up and shared it via her Twitter user channel. The video was retweeted more than 27000 times and ended up very quickly on almost every news website and every news television worldwide, both in web and broadcast.

It’s only six hours after that Mrs Aronheim acknowledged, in response to inquiries, that she was not in Brussels and that she had picked up the video from WhatsApp, without identifying the source of the footage. A couple of hours

¹⁶ <https://academiccommons.columbia.edu/doi/10.7916/D88S526V>

¹⁷ <https://www.youtube.com/watch?v=Khb8DaXVXRI> (1st video posted on Youtube on 22nd of March 2016)



Fig. 2. Screenshot of Brussels airport bombing video from parking lot, March 22nd 2016. Video captured by Pinchas Kopferstein

later, the Storyful “social news agency” as it defines itself claimed they had got the diffusion rights on this video from the owner and issued a copyright.

Two days later, David Clinch, global news editor at Storyful, was interviewed by the WAN-IFRA World Editors Forum, and complained against “the mass misattribution of a viral video”¹⁸.

In the study summarised in Table 1, conducted in November 2016, eight months after the Brussels bombings, we initially used the same panel of media as in the Tow Center report on amateur footage, listed in Table 2, and looked at copyright and credit mentions of the Brussels video.

¹⁸ <http://blog.wan-ifra.org/2016/03/24/mass-misattribution-of-viral-brussels-video>

Table 1. Copyright and credit mentions for the Brussels bombings viral video.

Media and Video Link	Credit	Copyright	Mention (sound-track/text)
Euronews English ¹⁹	no	no	no
Euronews Hungarian ²⁰	no	no	no
CNN ²¹	news_executive	@news_executive	no
BBC ²²	BBC	BBC	BBC TV coverage from Brussels as a series of explosions hit the city ²³
France 24 ²⁴	@AAronheim	no	Aronheim tweet ²⁵
France 24 Arabic YT channel ²⁶	no	no	no
Telesur ²⁷	no	no	no
Al Jazeera English ²⁸	no	no	no
NHK World	N/A	N/A	N/A
Al Jazeera Arabic ²⁹	no	no	no

Then, we completed our study incorporating more media brands, as summarised in Table 3.

¹⁹ <http://www.euronews.com/2016/03/22/panic-and-chaos-follows-brussels-airport-blasts>

²⁰ <http://hu.euronews.com/2016/03/22/magara-vallalta-az-iszlam-allam-a-brusszeli-merenyleteket>

²¹ <http://edition.cnn.com/videos/world/2016/03/22/brussels-airport-blast-explosions-elbagir-lklv.cnn/video/playlists/deadly-explosions-rock-brussels/www.cnn.com>

²² <http://www.bbc.com/news/world-35869074>

²³ According to sources from the European Broadcasting Union, it seems that the BBC was among the media who managed to get in touch with the content owner and to reuse the video, although no proper credit is displayed

²⁴ <http://mashable.france24.com/monde/20160322-les-images-amateurs-des-attentats-de-bruxelles?page=24>

²⁵ The video was not retrieved on two of the three France 24 channels (French, English) but it was present on the French version of the Mashable publication, which is partially owned by France 24

²⁶ <https://www.youtube.com/watch?v=5fO7huMnRgI>

²⁷ <http://videos.telesurtv.net/video/523613/belgicaelevan-alerta-maxima-en-bruselas-tras-attentados-con-explosivos>

²⁸ <http://video.aljazeera.com/channels/eng/videos/brussels-attacks:-explosions-hit-airport-and-metro/4811922768001>

²⁹ <http://www.aljazeera.net/news/international/2016/3/22/---->

Table 2. List of media outlets analysed in the Tow Center report on amateur footage

News Organization	Location of Headquarters	Language
Al Jazeera Arabic	Doha, Qatar	Arabic
Al Jazeera English	Doha, Qatar	English
BBC World	London, United Kingdom	English
CNN International	Atlanta, United States	English
euronews	Lyon, France	English
France 24	Paris, France	French
NHK World	Tokyo, Japan	English
Telesur	Caracas, Venezuela	Spanish

Table 3. Copyright and credit mentions by media brands beyond those in the Tow Center report.

Media and Video Link	Credit	Copyright	Mention (sound-track/text)
Deutsche Welle ³⁰	@AAronheim	no	Aronheim tweet
BFMTV ³¹	@AAronheim	no	Aronheim tweet and several screenshots with BFMTV logo
Sky news ³²	Pictures Anna Aronheim	no	no
N24 Deutschland ³³	@AAronheim	no	no
i24news English ³⁴	no	no	no
i24news French ³⁵	no	no	no
Russia Today English ³⁶	@tar791	no	no
Russia Today English ³⁷	Courtesy @exen	no	no
Russia Today English ³⁸	@AAronheim	no	Aronheim tweet
RTVE ³⁹	no	no	Twitter images
Fox News ⁴⁰	Fox News	no	no
ABC News Australia ⁴¹	ABC News	no	no

The above is just an illustrative example but shows the same results as the more systematic study conducted by the Tow Center about amateur footage and it also supports David Clinch’s claim of ”mass misattribution”. Like Tow Center report’s findings, channels do not properly mention the copyright holder or give proper credit to the owner. We find the same evidence with the viral video of the Brussels airport bombing.

Several reasons explain these findings:

- First, the urgency to report on breaking news events, especially when the only available eyewitness media comes from social networks. The cross-publishing of videos from mobile networks to web platforms render even more difficult the task to confirm the content ownership and to secure proper attribution.
- Second, the pressure of rolling news is very strong in breaking news situations and sometimes produces a ripple effect that eases the spread of hoaxes. If some big brand publishes a breaking news UGC video, other media are likely to follow, sometimes at the expense of being less rigorous in the verification process (and/or assuming that the big trustable brands have verified it and cleared the right to use it), taken for granted that the right of the public to be informed in a breaking news situation will overpass other rights.
- Third, the profusion of social networks, mobile instant messaging applications, micro-blogging platforms and new web sources is increasing competition (for media), complexity (for journalists and verifiers) and spreading speed.

2.2 Survey of Copyright Management News Industry Practices

This section includes the questions and responses from an online survey conducted to gather information about current practices in the news industry when

³⁰ <https://www.google.com/url?q=http://www.dw.com/en/blasts-in-brussels-live-updates/a-19132784>

³¹ <http://www.bfmtv.com/international/explosions-a-l-aeroport-de-bruxelles-961016.html>

³² <http://news.sky.com/video/video-passengers-flee-after-blasts-at-brussels-airport-10215814>

³³ <http://www.n24.de/n24/Nachrichten/Politik/d/8260954/internationale-reaktionen-auf-die-anschlaege.html>

³⁴ <http://www.i24news.tv/en/tv/replay/news/x3zbfrl>

³⁵ <http://www.i24news.tv/fr/tv/revoir/no-playlist/x3zbnot>

³⁶ <https://www.rt.com/news/336593-explosions-brussels-video-inside/>

³⁷ <https://www.rt.com/news/336519-explosions-hit-brussels-airport/>

³⁸ <https://www.rt.com/news/336523-brussels-zaventem-visitors-flee/>

³⁹ <http://www.rtve.es/alacarta/videos/los-desayunos-de-tve/desayunos-bruselas-220316/3533764/>

⁴⁰ <http://video.foxnews.com/v/4812990754001/?#sp=show-clips>

⁴¹ <http://www.abc.net.au/news/2016-03-22/brussels-airport-metro-rocked-by-explosions/7268106>

dealing with UGV content and copyright. During the requirements collection phase of the InVID project, seven responses were collected to the survey available online as a Google Form⁴².

The survey includes questions about:

- The origin of UGVs, like WhatsApp, Reddit, 4chan, Go-Pro community channel, Snapchat, Instagram, Bambuser, Vine, Vimeo, Daily Motion, Meerkat, Periscope online, Twitter, Facebook or YouTube.
- The nature of UGVs, ranging among simple recordings of facts, video reports/stories, documentaries or other types identified by the responder. Additionally, it was also requested the amount of reused UGVs that were commissioned, if any.
- The current UGV rights management process, including how copyright owner are identified, contacted to get permission for the reuse and if records of such authorisations are kept.
- The relationships with content generators, like content providers proactively offering UGVs or the existence of an internal register of productive UGV providers that are contacted or encouraged to provide content.
- The experience with litigations about UGV, including litigation experiences and arrangements regarding those litigations.
- The requirements for an automated user-generated video rights management system that might support them during the process of clearing the rights of UGVs.

The full results for the survey are available [7] and this chapter just includes a summary of the main outcomes. Regarding the origin of UGV reused by the news industry, responses to the questionnaire place the focus on three social networks as the main sources of social media for news reporting: YouTube, Facebook and Twitter.

From the point of view of the nature of these videos, they are mainly recordings of facts, thus constituting subject-matter, not works, consequently not having associated moral rights as detailed in Section 1.1.

When dealing with UGV rights, the main source to identify the owner is via social media user profiles, according to the survey results, and via direct conversation on the phone (or Skype and such like). Contributors are contacted mainly through social media messages. However, the most common way to get the authorisation to reuse is via e-mail.

Usually, the respondents keep record of these authorisations and include specific terms or conditions, which are related to specific territories, restricted time periods, exclusivity conditions or compensation requests.

Regarding the relationship with UGV creators, respondents only occasionally have content sent to them proactively. Respondents said they do keep track of users generating interesting content, but do not encourage them to generate and supply content actively. Most respondents have not been involved in litigations about UGV.

⁴² <https://goo.gl/forms/DoyEpLzCkBdph9J23>

Finally, regarding what they would like to see in a UGV rights management system, they are interested in support through the whole process, from identifying and contacting the owner to obtaining a reuse authorisation the system keeps track of. They also want the system to be able to quickly reach the owner and clearly communicate the intended reuse so an agreement can be reached in a timely manner.

2.3 Social Networks Policies Regarding User Generated Content

The focus of this section is on the social networks' policies regarding the social media made available through them. This is a key issue to explore in how InVID and its users can reuse social media. As the survey results show, the main sources of social media are YouTube, Facebook and Twitter. This is also supported by the experience of the InVID partners part from the news industry. The following sections summarise the relevant parts of social networks' Terms and Conditions (T&C) regarding content.

YouTube Regarding content, YouTube's Terms of Service⁴³, they state that content should not be directly downloaded and that the content owner retains all rights. Consequently, the owner should be contacted to seek authorisation for uses beyond consuming the content through YouTube services. It is assumed that the content owner is the person who has uploaded the content since s/he has claimed so when uploading the content by accepting YouTube terms for uploaded content: but this assumption may not always be true since many users are uploading third-parties content to social media platforms.

In this regard, YouTube makes the recommendations presented next when re-broadcasting YouTube content⁴⁴. This also applies when republishing content outside the context of YouTube, for instance making the video available through a newspaper website without using YouTube features for video embedding:

- “Credit the content owner. Though YouTube has a license to distribute the video, it's the YouTube user who owns the content. We encourage you to reach out to users directly when you find video you'd like to use, and to provide attribution by displaying the username or the real name of the individual, if you've obtained it.”
- “Credit YouTube in your re-broadcast of the video. When you show a YouTube video on television, please include on-screen and verbal attribution.”
- “Contacting a YouTube user. Clicking on a YouTube username will take you to the user's channel, where you can see what personal information s/he has shared (name, web site, location, etc.). From here, you can use YouTube's on-site messaging system to contact the user. First, you must be logged into your own YouTube account. Then, click on the username of the individual you'd like to reach out to and select 'Send Message.' ”

⁴³ <https://developers.google.com/youtube/terms>

⁴⁴ <https://www.youtube.com/yt/press/media.html>

The previous guidelines apply to any video available under YouTube’s terms. Alternatively, YouTube contemplates that uploaders make their content available using a Creative Commons license, concretely the CC-BY license: ”by marking an original video of your property with a Creative Commons license, you grant the YouTube community the right to reuse and edit this video”⁴⁵. UGV licensed under this terms can be edited using the YouTube Video Editor and then downloaded from there.

With videos licensed under a CC-BY license, you are free to copy and redistribute the material in any medium or format and remix, transform, and build upon the material for any purpose, even commercially. The licensor cannot revoke these freedoms as long as license terms are followed. The only requirement is attribution while the derived videos do not need to be made available under the same CC-BY license.

This is the only Creative Commons license currently supported by YouTube, the least restrictive of all Creative Commons options. It is mainly intended to facilitate video remixing with artistic and creative purposes and not likely to be used by uploaders of eyewitness media. In any case, the InVID platform should make this information available to journalists to facilitate the process of UGV reuse. This information is available through YouTube’s API.

Twitter Like YouTube, Twitter also clarifies in its Terms of Service that the uploader retains all rights. Consequently, it is possible to contact the uploader to get permission for reuses outside the scope of this social network. However, as noted for YouTube, the assumption that the uploader is the author/creator of the content is to be cautiously taken: s/he may be uploading third parties’ content. In any case, the range of rights granted by the uploader is very wide⁴⁶, as detailed next:

- “You retain your rights to any Content you submit, post or display on or through the Services. What’s yours is yours – you own your Content (and your photos and videos are part of the Content).”
- “By submitting, posting or displaying Content on or through the Services, you grant us a worldwide, non-exclusive, royalty-free license (with the right to sublicense) to use, copy, reproduce, process, adapt, modify, publish, transmit, display and distribute such Content in any and all media or distribution methods (now known or later developed). This license authorizes us to make your Content available to the rest of the world and to let others do the same. You agree that this license includes the right for Twitter to provide, promote, and improve the Services and to make Content submitted to or through the Services available to other companies, organizations or individuals for the syndication, broadcast, distribution, promotion or publication of such Content on other media and services, subject to our terms and conditions for

⁴⁵ <https://support.google.com/youtube/answer/2797468?hl=en>

⁴⁶ <https://twitter.com/tos?lang=en>

such Content use. Such additional uses by Twitter, or other companies, organizations or individuals, may be made with no compensation paid to you with respect to the Content that you submit, post, transmit or otherwise make available through the Services.”

- “Twitter has an evolving set of rules for how ecosystem partners can interact with your Content on the Services. These rules exist to enable an open ecosystem with your rights in mind. You understand that we may modify or adapt your Content as it is distributed, syndicated, published, or broadcast by us and our partners and/or make changes to your Content in order to adapt the Content to different media. You represent and warrant that you have all the rights, power and authority necessary to grant the rights granted herein to any Content that you submit.”

To sum up, the user grants to Twitter a worldwide, non-exclusive, royalty-free license (with the right to sublicense) to use, copy, reproduce, process, adapt, modify, publish, transmit, display and distribute such content in any and all media or distribution methods (now known or later developed). This license includes the right for Twitter to provide, promote, and improve the Services and to make content submitted to or through Twitter available to other companies, organisations or individuals for the syndication, broadcast, distribution, promotion or publication of such content on other media and services, subject to their terms and conditions for such content use. Such additional uses by Twitter, or other companies, organisations or individuals, may be made with no compensation paid to its owner with respect to the content that s/he submits, posts, transmits or otherwise make available through the Services. In addition, the user should represent and warrant that s/he has all the rights, power and authority necessary to grant the rights granted herein to any content that s/he submits.

For all of these reasons, and like in the case of YouTube, it might be also considered beyond the end of the project, and when commercial exploitation of InVID starts, to establish agreements with Twitter as a way of getting access to the content to be verified, as this kind of use can be granted by Twitter under the Terms of Service accepted by the uploader.

Facebook Like for the rest of analysed social networks, Facebook’s terms⁴⁷ also state that the user retains ownership of the content posted to Facebook, assuming s/he is not uploading third parties’ content:

- “You own all of the content and information you post on Facebook, and you can control how it is shared through your privacy and application settings.”
- “For content that is covered by intellectual property rights, like photos and videos (IP content), you specifically give us the following permission, subject to your privacy and application settings: you grant us a non-exclusive, transferable, sub-licensable, royalty-free, worldwide license to use any IP content

⁴⁷ <https://www.facebook.com/terms.php>

that you post on or in connection with Facebook (IP License). This IP License ends when you delete your IP content or your account unless your content has been shared with others, and they have not deleted it.”

- “When you delete IP content, it is deleted in a manner similar to emptying the recycle bin on a computer. However, you understand that removed content may persist in backup copies for a reasonable period of time (but will not be available to others).”
- “When you use an application, the application may ask for your permission to access your content and information as well as content and information that others have shared with you. We require applications to respect your privacy, and your agreement with that application will control how the application can use, store, and transfer that content and information. (To learn more about Platform, including how you can control what information other people may share with applications, read our Data Policy and Platform Page).”
- “When you publish content or information using the Public setting, it means that you are allowing everyone, including people off of Facebook, to access and use that information, and to associate it with you (i.e., your name and profile picture).”
- “We always appreciate your feedback or other suggestions about Facebook, but you understand that we may use your feedback or suggestions without any obligation to compensate you for them (just as you have no obligation to offer them).”

In the case of Facebook, the user can also control how it is shared with using the privacy settings. For instance, the user can restrict content sharing to just his friends, so content is not publicly available or available through Facebook’s API for data processing. Consequently, the legitimate interest exception mentioned before.

On the contrary, if content is shared publicly, Facebook’s terms state: “When you publish content or information using the Public setting, it means that you are allowing everyone, including people off of Facebook, to access and use that information, and to associate it with you (i.e., your name and profile picture)”. Consequently, in this case, the legitimate interest exception will apply and user data can be processed like in the cases of YouTube and Twitter.

In addition, a Facebook user grants Facebook a non-exclusive, transferable, sub-licensable, royalty-free, worldwide license to use any Intellectual Property content that s/he posts on or in connection with Facebook (IP License). This IP License ends when s/he deletes her/his IP content or her/his account.

3 InVID Rights Management Design

The main project components from the user perspective are:

- **InVID Dashboard:** it allows journalists to explore news events from social networks and identify social media posts and videos that they might use for

news reporting. From the dashboard, they can also check the verification and rights status of the selected media items. If verification is required, journalists can get support through the InVID Verification Application.

- **InVID Verification Application:** supports journalists during the video verification workflow. This verification process also includes retrieving available information about the copyright status of the media item. If the journalist decides to reuse it, the application also supports the process of contacting the content owner and negotiating a reuse agreement.

The previous description of the functionality of the project’s main components determines the lifecycle of UGV from a copyright perspective, applied to InVID but generalisable to any process involving the clearance of UGC for journalistic purposes. The steps of this lifecycle are summarised in Figure 3.

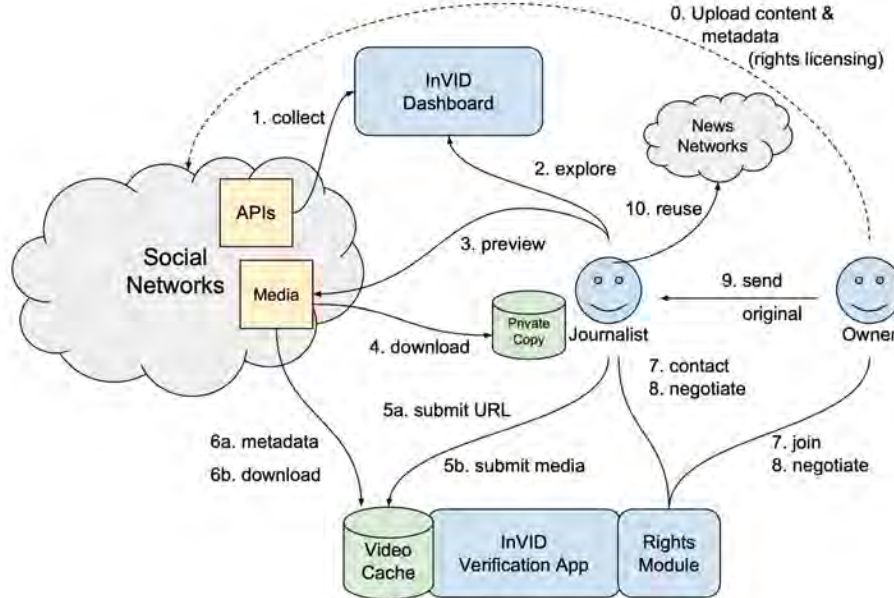


Fig. 3. UGV lifecycle from a copyright perspective

From Fig. 3 it is possible to analyse the legal implications, focusing on copyright law, of each of the identified steps:

1. The InVID Dashboard collects items as links from social networks using the APIs they provide. These items correspond to content uploaded by users, shown as step 0 in Fig. 3.

Legal Perspective: the InVID components using these API should comply with their terms of service, as described in Section 2.2.

2. The user consumes the social network items through links from the InVID Dashboard.
3. When media from the social networks is available, it is embedded or linked back to the social network so it is consumed from its source.

Legal Perspective: the terms of service of social networks and copyright law allow linking or embedding practices. On the other hand, they forbid downloading or require getting permission from the content owner for content reproduction

4. In practice, when the user identifies an interesting piece of content, the journalist might directly download media from the social network for preservation purposes only, as recommended in different verification guidelines like Amnesty International's⁴⁸

Legal Perspective: downloading is not permitted by most social networks' terms of service, for instance, YouTube as detailed in Section 2.2. This chapter explores exceptions that might allow journalists to download media for verification purposes. Section 3.3 analyses alternatives like private copy or exceptions for "press and reporting" purposes.

5. If the journalist is interested in the UGV but wants to check the accuracy or has doubts about its authenticity, the verification process can be triggered using the InVID Verification application.

(a) The journalist submits the URL of the UGV in the corresponding social network.

(b) Alternatively, if the journalist has obtained the video by other means, it can be submitted to the InVID Verification Application.

Legal Perspective: storing the submitted video is an act of reproduction that would require getting reproduction rights from its owner. Copyright exceptions are explored in Section 3.3, particularly those related to research purposes.

6. The InVID Verification application supports the UGV verification process. Most of these verification steps are based on metadata about the video, other steps are content-based and thus require a temporal cached copy of the video binary file.

(a) For verification based on video metadata, it can be usually retrieved from the social network using the video URL and the corresponding metadata API. Alternatively, metadata can be also retrieved from the video file if submitted by the journalist.

Legal Perspective: as long as the available metadata APIs are used and content is not involved, their corresponding terms of service are the only limitations to take into account. If the journalist submitted a content file, then the same considerations as for the previous point 5b apply.

(b) For verification based on video content, if the video file was not submitted by the journalist, it is necessary to retrieve the content from the social

⁴⁸ Amnesty International Citizen Evidence Lab, <https://citizenevidence.org/2014/04/10/how-to-downloading-and-preserving-videos/>

network or from alternative sources like the content owner.

Legal Perspective: the terms of service of the social networks forbid downloading videos as detailed in Section 2.2. Moreover, copyright law requires reproduction permission from the content owner. In jurisdictions where press exceptions could allow reproduction of copyright protected material, the person sheltered by the press exception will presumably be the journalist, but not the InVID Verification Application. Section 3.3 explores the applicability of other exceptions like research purposes.

7. If the journalist wants to reuse the UGV, the InVID Rights Management module can be used to contact the alleged content owner and establish reuse conditions. The journalist should first check, using InVID Verification Application, this is the first share of the video. Moreover, the invite sent to the social network user requests confirmation s/he is the person who shot the video and includes a disclaimer about this being assumed if the user accepts the invite. The owner should accept the invite in order to log in the Rights Management module and use the credentials of the social network where the content was posted in order to facilitate ownership verification.
8. When the alleged content owner joins the InVID Rights Management module, InVID first checks ownership of the UGV: this verification is based on the identity of credentials from the content owner accessing the platform with the credentials of the social network where UGV was posted. If the check is successful, then the owner is invited to review the conditions of the reuse request, accept them or adjust them until s/he reaches an agreement with the journalist.
9. If a reuse agreement is reached, the content owner can then send the video file to the journalist. This might be a better quality version than the one available from social networks.

Legal Perspective: the agreement should include copyright license terms that allow reuse including rights licensed, scope (exclusivity, duration, territory, channels, etc.), economic reward if any,... It is also recommended that the agreement involves the content owner providing a copy of the original content to the journalist. This will be a legal reproduction that can then be reused under the agreed conditions.
10. After an agreement has been established with the content owner, it would then be possible to reuse the UGV under the terms established in that agreement. However, it is also anticipated that under pressing conditions about current events it might be impossible to get a response from the content owner in due time. Consequently, the journalist should be capable of overriding the InVID Rights Module and proceed to reuse under this particular conditions.

Legal Perspective: as long as an agreement with the content owner has been reached, it will enable the agreed reuses, for instance, to republish the video. However, in the situation of UGV about current events for which it has not been possible to contact or reach an agreement with the content owner, the journalist might also proceed to reuse it under copyright law exceptions like current events reporting, which are explored in Section 3.3. In this situ-

ation, the journalist should be made aware of possible risks and/or possible implications that s/he should check for her/his particular jurisdiction.

3.1 InVID Architecture

The rights management components that implement most of the legal requirements are part of the overall InVID Platform architecture as shown in Figure 4, where the components in charge of rights management are highlighted using a red outline (for those on the server side) or orange (client side). A detailed view of the rights management components is provided in Figure 5.

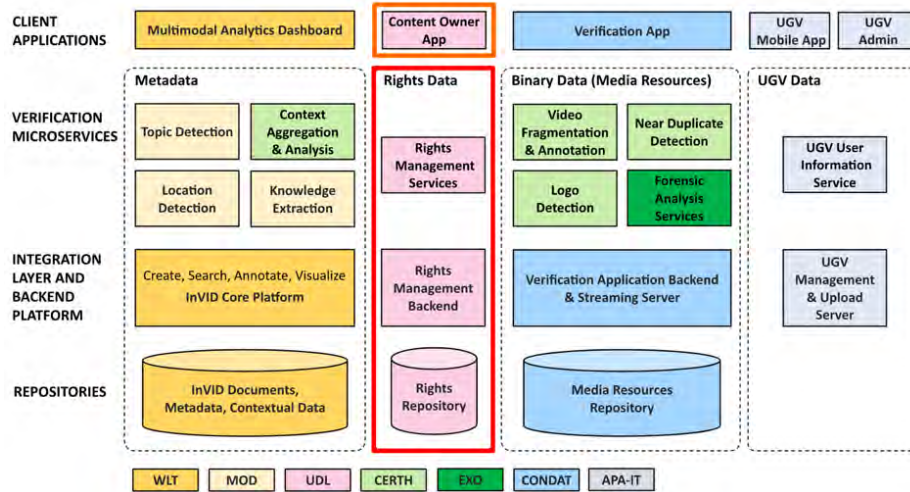


Fig. 4. Overall architecture of the InVID platform with the rights management components highlighted with a red outline

Next, further details about all the components related to rights management are provided. For the client side:

- **Rights Management App:** Web application initially conceived as the Content Owner App because it was intended to serve them. It provides them the landing page for invites, the registration mechanisms for content owners and the means to inspect reuse requests, define reuse policies and negotiate reuse terms. However, as it finally also provided functionality for journalists, it was finally named the Rights Management App. It helps journalist prepare reuse request and participate in the negotiation process.
- **uPort App:** mobile application developed by uPort and available for Android and iOS that helps users manage their identities if they intend to use the blockchain capabilities of InVID, as detailed next.

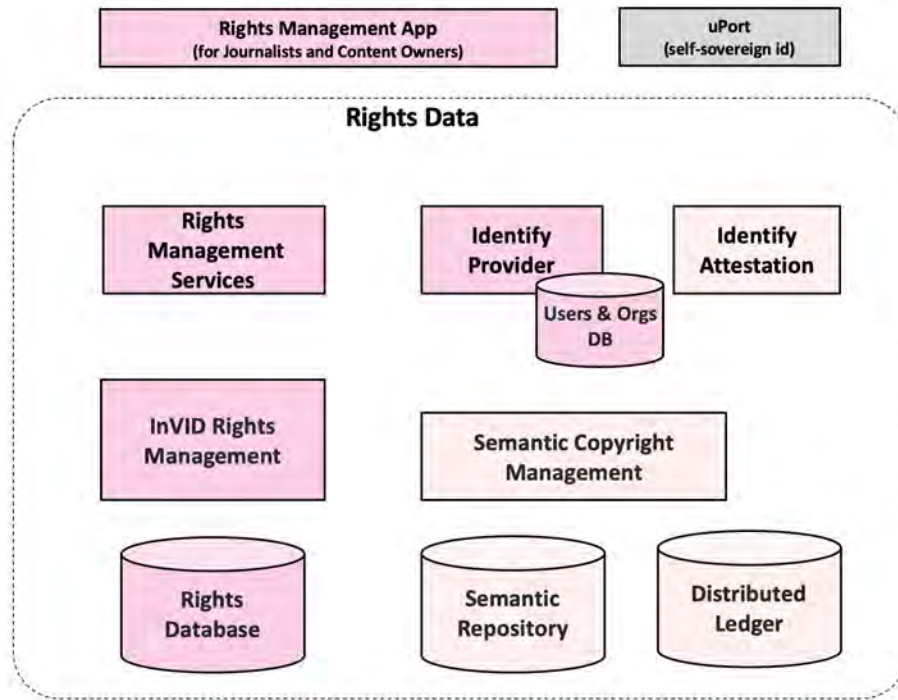


Fig. 5. Detailed architecture of the rights management components

And for the server side:

- **Rights Management Services:** this component provides the RESTful API that facilitates the integration of the Rights Management module with the rest of the InVID Platform.
- **Identity Provider:** centralises authentication of InVID users (journalists) at a platform level and provides the authentication tokens required for secure consumptions of the available services.
- **Identity Attestation:** Web service that provides attestations compatible with the uPort application about platforms users identity. Concretely, it provides attestations for users' e-mail and social network membership (Google, Facebook and Twitter). These attestations are stored in the users' devices thanks to the uPort application, so they can be managed by them in a self-sovereign way.
- **Users and Organisations Database:** this is the central store of InVID users' credentials and profile information, e.g. which organisation they belong to.
- **InVID Rights Management:** this component implements the Rights Management Services available through the API and coordinates the rest of the Rights Management module components.
- **Rights Database:** this is the main repository used by the module to store the entities that are part of the Copyright Model, which is detailed in Section 3.2.
- **Semantic Copyright Management:** this component complements the InVID Rights Management one and is responsible for dealing with the copyright management aspects that require the Copyright Ontology, the use of semantic technologies and reasoning about rights.
- **Semantic Repository:** this repository stores the representations of Rights Terms, Rights Policies or Rights Agreements using the Copyright Ontology. It also provides the reasoning capabilities that facilitate checking if an intended reuse is supported by existing policies or agreements, as detailed in Section 3.2.
- **Distributed Ledger:** once an agreement between a reuser (usually a journalist) and a content owner is reached, it is represented using the Reuse Agreement defined in the Copyright Model. To immutably store the agreement and when it was reached, so it can be used later for auditing purposes, a distributed ledger based on blockchain systems like Bitcoin will be used [9].

3.2 Copyright Model

This copyright model constitutes the core of the Rights Management module domain model. These are the entities and relationships capturing the static aspects of the legal domain analysed in Section 1.1. It is based on the Copyright Ontology [3] which facilitates implementing automated checking of reuse terms against existing reuse policies or agreements.

Copyright law is a very complex domain, so aiming to provide computerised support for rights management, InVID proposes to use semantic technologies and ontologies. Thanks to the reasoning capabilities these technologies provide, these semantic models can be then used to support intelligent decision support at the scale and level of detail required by UGV reuse. This approach has been previously tested in different research and development projects, with promising results in domains like music licensing, UGC monetization or rights expression languages standardisation [5, 4, 6].

The main building blocks of the Copyright Ontology, which goes beyond an access control language and models the core concepts in the copyright domain, are the different rights that compose Copyright. From Economic Rights like Reproduction Right to related rights like Performers Rights, even considering Moral Rights.

However, this is not enough and computers require an understanding of copyright beyond the list of copyright rights to assist users during copyright management. The issue is to understand, for instance, what does it imply to hold the Making Available Right. To this end, at the core of the Copyright Ontology, there is the action model that represents the different “states” a creation might go through during its lifecycle, and the actions that copyright value chain participants can perform to move creations along that value chain, as shown in Figure 6.

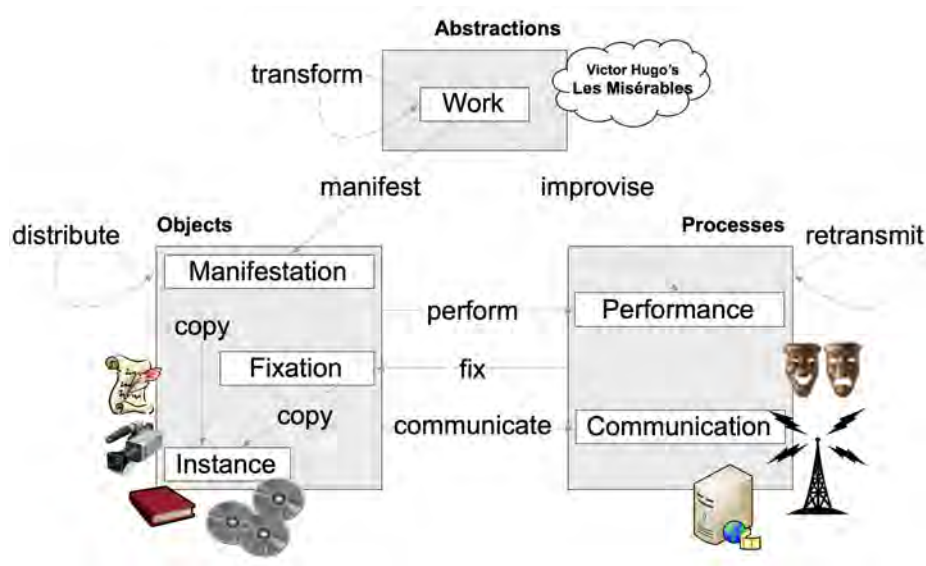


Fig. 6. The Copyright Ontology creation life-cycle

Each of these actions is connected to the corresponding right. For instance, the communicate action is governed by the Communication Right. Therefore, to

hold the Communication Right on a creation like a video means that it is possible to perform the communication action on it and, depending on the medium, broadcast it or make it available from a Web page.

The Copyright Ontology provides a shared understanding of copyright terms and a reference framework for tools that guide users willing to state under what conditions they are making their content available. This framework will be used by rights management tools in InVID to assist UGV consumers and producers during the rights negotiation process. Additionally, the resulting formal rights statements can be used to keep track of previous decisions, to clarify liability issues and even to completely automate further interactions. To this end, agreements are stored in a distributed ledger repository, so they can be later audited in a secure way. The distributed ledger is presented in the detailed architecture diagram depicted by Figure 5.

For instance, UGV producers can define their preferences in relation to how they want their content to be reused and the different compensations they require depending on the kind of reuse, the reuser, the territories where reuses take place, etc. Semantic technologies and the Copyright Ontology make it possible to very accurately and unambiguously define all these terms, so they can then be made machine actionable.

Existing tools, such as reasoners or rule engines, can be fed with the semantic versions of these rights expressions and define patterns of actions that are allowed by some previous agreement or prohibited by user-specific policies. Reasoners and rule engines can then check if a particular action that some reuser is trying to perform, like trying to broadcast a YouTube video about a current news event, is allowed or not by checking it against all semantic models created for digital rights expressions, policies or contract about that asset. The reasoner does the hard work of checking all possibilities, minimising implementation cost while maintaining the flexibility and scalability of the proposed solution. These features are supported by the Semantic Repository component depicted in Figure 5.

The last building block of the copyright model provided by the Copyright Ontology are the roles that model the links between the previous copyright actions and the “facets” of these actions, which include who can perform it, when or where. The full set of facets under consideration is presented in Table 4.

Modelling Example This subsection presents a modelling exercise that uses the building blocks provided by the Copyright Ontology, presented in the previous section, to model part of real social media reuse agreement. It is the Storyful Agreement⁴⁹, from which the following fragments are highlighted:

- “The Storyful news agency finds newsworthy content and gets permission from owners to use it on TV, print, radio and websites.”

⁴⁹ Storyful Content Agreement, <http://www.storyful.com/clearance>

Table 4. Facets provided by the Copyright Ontology to model copyright actions details.

Facet	Main role	Other roles
Who	agent	participant (indirect co-agent), recipient
When	pointInTime	start, completion, duration
Where	location	origin, destination, path
What	object	patient (changed), theme (unchanged), result (new)
With	instrument	medium
Why	aim	reason
How	manner	
If	condition	
Then	consequence	

- “By agreeing that your content may be used, you grant Storyful and its news partners permission to broadcast or republish your content. This permits Storyful and its partners to use your content in whole or in part in TV packages, in online players and/or on their YouTube channels. You retain all ownership rights.”
- “Storyful always asks that partners credit any source when content is used.”
- “3. You hereby grant Storyful a worldwide, non-exclusive, royalty-free, perpetual, sublicensable and transferable license to use, reproduce, distribute, prepare derivative works of, display, and perform the Content in any media formats and through any media channels.”

Using the Copyright Ontology, and focusing on just one of these terms, republish, the corresponding model based on copyright actions and facets will be:

- **Action:** republish (governed by the Communication Right, concretely the Making Available Right)
- **Who:** Storyful
- **What:** uGVs/0Hu1cY
- **When:** from 2017-06-30
- **How:** non-exclusive
- **If (condition):** attribute (recipient: UGV owner, what: “attribution message”)

The previous copyright term representation will be linked to a Reuse Agreement, which marks the pattern defined by the term as “agreed”. Any action the reasoner detects as matching it will be authorised, taking into account that unrestricted facets are interpreted as any value is permitted. For instance, the “where” facet is not restricted by the agreed term so it is interpreted as worldwide applicable. For instance, if later someone at Storyful requests the following reuse, it will be authorised because it matches the previously agreed term:

- **Action:** republish
- **Who:** Storyful
- **What:** uGVs/0Hu1cY

- **When:** 2017-07-10
- **Where:** USA

However, to be matched, the condition should be also satisfied so there should be a registered attribution action like:

- **Action:** attribute
- **Who:** Storyful
- **What:** "Video from YouTube user 'elrubius' "
- **Recipient:** elrubius

On the other hand, it is also possible to block actions from happening by using disagreements, instead of agreements. This can be done from a Reuse Policy, for instance. Then, even if the indented action matches an agreed reuse term, the disagreed pattern takes precedence and it will be disallowed, as shown in Figure 7.

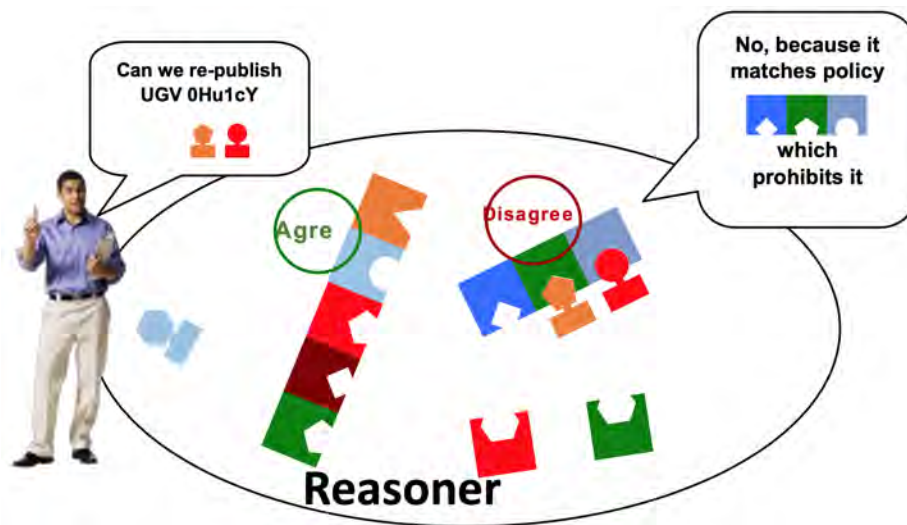


Fig. 7. Copyright reasoning based on action patterns defined using the Copyright Ontology

3.3 Copyright Exceptions Guidelines

These guidelines provide a review of the copyright exceptions identified in Section 1.1 and relevant for journalists and social media verification, and the InVID platform in particular. The guidelines for each copyright exceptions are presented in the next subsections.

Scientific Research Exception Text from the Directive 2001/29/EC⁵⁰: Scientific research (5.3.a): "use for the sole purpose of illustration for teaching or scientific research, as long as the source, including the author's name, is indicated, unless this turns out to be impossible and to the extent justified by the non-commercial purpose to be achieved".

This exception is mainly relevant for InVID as a platform and as long as it is a scientific research project.

Ephemeral recordings of works by broadcasting organisations Text from the Directive 2001/29/EC: Ephemeral recordings of works by broadcasting organisations (5.2.d): "in respect of ephemeral recordings of works made by broadcasting organisations by means of their own facilities and for their own broadcasts; the preservation of these recordings in official archives may, on the grounds of their exceptional documentary character, be permitted".

InVID is not a broadcasting organisation, therefore, it cannot benefit from this exception, where available. Only journalistic organisations that are also broadcasters might benefit, and, in any case, the intent of this exception is basically technical, for archiving and retransmission purposes.

Use by the Press Text from the Directive 2001/29/EC: Use by the press (5.3.c): "communication to the public or making available of published articles on current economic, political or religious topics or of broadcast works or other subject-matter of the same character, in cases where such use is not expressly reserved, and as long as the source, including the author's name, is indicated, or use of works or other subject-matter in connection with the reporting of current events, to the extent justified by the informatory purpose and as long as the source, including the author's name, is indicated, unless this turns out to be impossible".

Though InVID as a platform cannot benefit from this exception because it is not a press organisation, this is the fundamental exception to be used by the InVID users that are journalists when they are not able to get a reuse authorisation. However, they should take into account that it is only when reporting about current events.

Private Use Text from the Directive 2001/29/EC: Private copy (5.2.b): "in respect of reproductions on any medium made by a natural person for private use and for ends that are neither directly nor indirectly commercial, on condition that the rights holders receive fair compensation which takes account of the application or non-application of technological measures referred to in Article 6 to the work or subject-matter concerned".

⁵⁰ Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society. <http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32001L0029>

This exception is just for natural persons for private use and non-commercial purposes. Consequently, InVID cannot benefit from it neither the journalist acting on behalf of their organisations or with a commercial purpose.

Quotation for Criticism or Review Text from the Directive 2001/29/EC: Quotation for criticism or review (5.3.d): "provided that they relate to a work or other subject-matter which has already been lawfully made available to the public, that, unless this turns out to be impossible, the source, including the author's name, is indicated, and that their use is in accordance with fair practice, and to the extent required by the specific purpose".

This exception, which allows quotations as long as the relevant conditions are met, is meant to make Member States fulfil International Treaties obligations such as the one included in Article 10(1) of the Berne Convention, which reads "it shall be permissible to make quotations from a work which has already been lawfully made available to the public, provided that their making is compatible with fair practice, and their extent does not exceed that justified by the purpose, including quotations from newspaper articles and periodicals in the form of press summaries".

Consequently, this exception is relevant when trying to keep track of fake videos that quite likely will disappear. As per the Terms of Use of the social networks from where these videos come from, if the content disappears from the social network it should be also removed from InVID, even the associated metadata.

However, it is possible to benefit from this exception, in jurisdictions where it is available, when the aim is to create a new work that is a review or critic of the original UGV. For instance, to illustrate the evidence pointing out the modifications or facts that make the video a fake. To do so, several conditions should be met:

1. A new derived work should be published (it could be a report or a derived video);
2. The UGV should have been previously lawfully made available to the public: if not flagrantly illegal, it can be understood that content uploaded by users who accept terms and conditions where they warrant to be the creators and copyright holders of the uploaded content presumably entails a lawful publication;
3. The source and author name of the original UGV shall be indicated (unless impossible) when releasing the own work where the UGV is reviewed;
4. The use shall be accordant to fair practice and made to the extent required by the specific purpose of its own review work: this seems to be within the limits of the verification process.

Fair Use and Fair Dealing Fair Use is a United States judicially-created doctrine that is codified, today, in section 107 of the US Copyright Act (USCA), which reads:

”The fair use of a copyrighted work... for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright.”

This provision is a defence to a lawsuit, not a safe harbour. This means that an allegedly infringing use that would otherwise constitute a copyright infringement, may be considered “fair” (non-infringing) by a Court upon verification, on a case-by-case basis, that (a) the use is made for criticism, comment, news reporting, teaching, or scholarship and research and (b) that it meets each and all of the four specific conditions listed in section 107 USCA, that reads:

“In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include:

1. the purpose and character of the use, including whether such use is of a commercial nature or is for non-profit educational purposes;
2. the nature of the copyrighted work;
3. the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
4. the effect of the use upon the potential market for or value of the copyrighted work. ”

Fair use can apply to unpublished works (section 107 USCA in its last paragraph, reads: “The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.”)

Since fair use is an analysis by a Court, there is no checklist that can determine, prior to any use, which uses can fall under the fair use doctrine.

EU Common Law jurisdictions such as the United Kingdom, Ireland and Cyprus include the concept of “fair dealing” in their copyright legislations. As the UK Copyright Office acknowledges⁵¹:

“Certain [copyright] exceptions only apply if the use of the work is a ‘fair dealing’. For example, the exceptions relating to research and private study, criticism or review, or news reporting.

‘Fair dealing’ is a legal term used to establish whether a use of copyright material is lawful or whether it infringes copyright. There is no statutory definition of fair dealing - it will always be a matter of fact, degree and impression in each case. The question to be asked is: how would a fair-minded and honest person have dealt with the work?

Factors that have been identified by the courts as relevant in determining whether a particular dealing with a work is fair include:

- Does using the work affect the market for the original work? If a use of a work acts as a substitute for it, causing the owner to lose revenue, then it is not likely to be fair.
- Is the amount of the work taken reasonable and appropriate? Was it necessary to use the amount that was taken? Usually, only part of a work may be used.

⁵¹ <https://www.gov.uk/guidance/exceptions-to-copyright>

The relative importance of any one factor will vary according to the case in hand and the type of dealing in question”.

In the UK, fair dealing for criticism, review or quotation is allowed for any type of copyright work, whereas fair dealing for the purpose of reporting current events is allowed for any type of copyright work other than a photograph.

Journalists based on jurisdictions where Fair User or Fair Dealing applies may rely on this special provisions when reusing content basically to report about current events. However, though its practical use might be similar to the presented for the Use by the Press copyright exception, journalists should check how it is actually regulated in the particular territory, shown in Figure 8, where they are going to conduct the reuse. Summaries of the legislation about Fair Use and Fair Dealing worldwide are provided in the “The Fair Use/Fair Dealing Handbook” [1].



Fig. 8. Countries where Fair Use of Fair Dealing applies as reported by Band & Gerafi [1]

4 Conclusions and Future Work

From a legal perspective and according to the current EU copyright framework, our recommendations regarding the legal scope of a platform for social media verification, like the InVID platform, are the following:

- Legal coverage for verification operations involving content reproduction might be based on the research project exception, presented in Section 3.3.

This includes content reproduction for UGV verification, plus public communication when fake content is detected. If the platform has a commercial purpose and cannot benefit from the research exception, the recommendation is to explore agreements with social media platforms in order to get permission for media reproduction for verification purposes as part of the terms and conditions agreed by the social network users. Alternatively, content can be downloaded directly by the platform users as natural persons based on the private use exception and then submitted by them to the platform for verification.

- Regarding the reproduction and making available fake content, especially for preservation, the verification platform could benefit from the quotation for criticism or review exception presented in Section 3.3 if it delivers a final review work of its own where the previous work (i.e. the UGV) is reviewed or criticised. The platform may rely upon this exception especially regarding the construction of a reference social media fakes database.
- Platform users, either journalists or media/press companies, shall ensure legal broadcasting through licensing of the UGV or the use by the press exception where available just for current events, as detailed in Section 3.3. If the use by the press exception is not possible, licensing for end users (media/press companies) reuse requires obtaining express authorization. This can be achieved through a system requiring UGV creators to explicitly authorise such reuse, as facilitated by the InVID platform. However, first, content ownership should be checked or at least confirmed with the content uploader, as also facilitated by InVID. Ownership is based on who shot the video and not on who uploaded it or who is the recording device owner, as detailed in Section 1.1.
- Finally, and just for platform users, not the platform itself, operating in countries where Fair User or Fair Dealing applies, they can rely on this special provision when reusing content basically to report about current events. A guideline for the particular territory where they are going to conduct the reuse can be obtained from “The Fair Use/Fair Dealing Handbook” [1].

These recommendations have been implemented as part of the internal operations of the InVID platform but also as part of the InVID Rights Management module which facilitates journalists and content owners following them when social media reuse is intended.

This functionality allows the InVID users (journalists) to authenticate, to check UGVs (from YouTube, Twitter and Facebook) and to retrieve relevant copyright and contact information including a default attribution message. Moreover, journalists can generate reuse requests for the content they are interested in, which specify the scope of the reuse through one or more reuse terms. Finally, when the UGV content owner is not yet registered in InVID, journalists can also obtain a sample invite message that can be sent to the content owner.

On the other hand, content owners get mechanisms for authentication and social network credentials management. Content owners can also retrieve reuse request, including an invitation when they are not registered in InVID yet. Fi-

nally, they can accept, reject or negotiate these reuse requests. In case of negotiation, InVID users can also respond to the counterproposals about reuse conditions received from content owners in the same way, by accepting, rejecting or continuing the negotiation.

Additionally, InVID users are also capable of cancelling previous agreements, for instance, if there is a substantial change that makes the agreement unfair like a very successful UGV. In this case, the content owner might contact the journalist using the contact details that are provided with reuse request and also included in the agreement.

In addition to negotiation support, the project features functionality enabling semantic copyright management. This has facilitated the implementation, in a very flexible and extensible way, of an additional functionality for journalists: to check if there are previous agreements for a particular UGV that enable the kind of reuse they are interested in.

Forward-looking, the Rights Management module started to experiment with blockchain technologies for the storage of these agreements, so it is possible to get proof their existence and even non-repudiation. These experiences set the foundations for the generation of legally binding agreements among journalists and content owners, which will be explored as part of future work.

5 Acknowledgements

We would like to thank Ramon Arnó for his guidance and support while addressing the privacy issues we have encountered along the development of the InVID project, ranging from project data management to GDPR compliance.

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