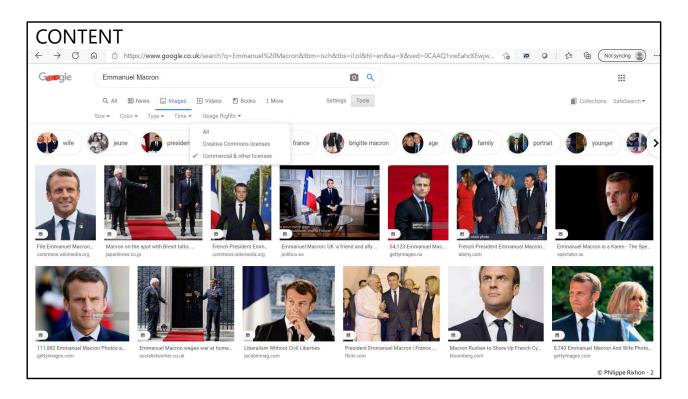


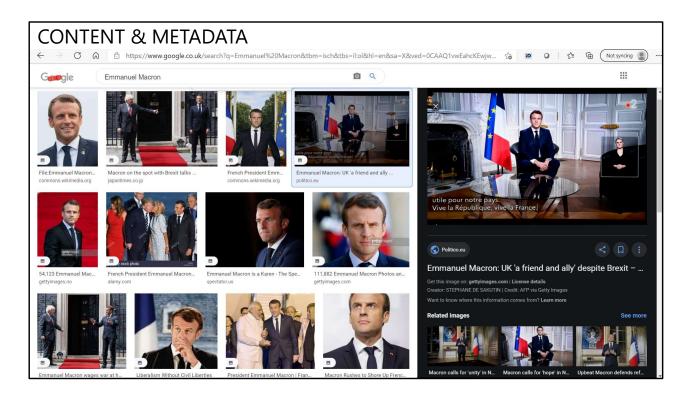
One Broader Licensing Opportunity in the Light of New Technologies

Philippe Rixhon, CBT, University College London Online Workshop "Copyright Data Improvement in the EU" Thursday, 6 May 2021

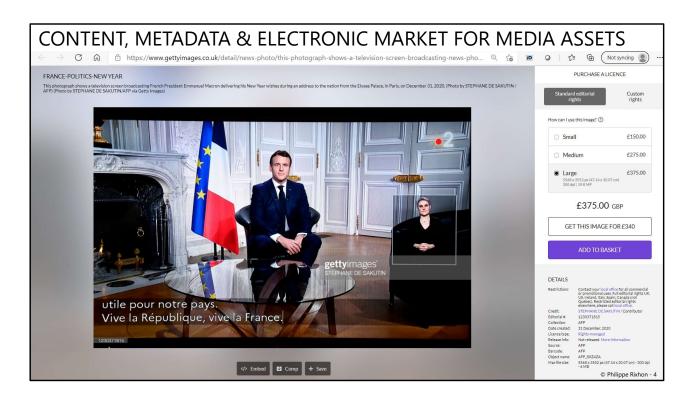
One example. Combining new technical developments of Al and blockchain could allow press publishers, and others, to take full advantage of the neighbouring right granted by Article 15 of the directive on copyright.



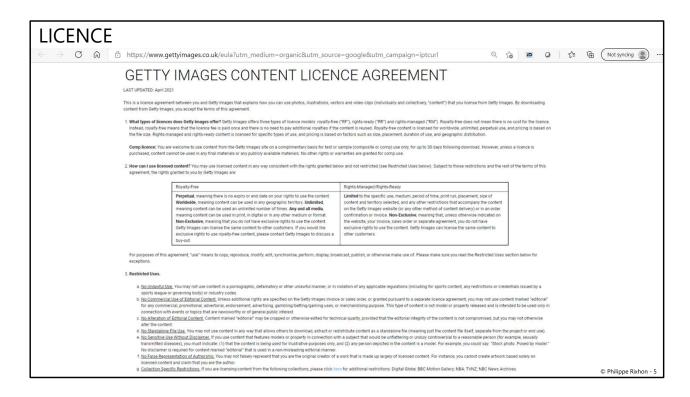
One illustration. I need an image of Emmanuel Macron, search the web, and land here. One of the Google *Tools* allows me to look for *Usage Rights* and select *Commercial & other licenses*. The fourth image from the left fits my purpose. I click on it.



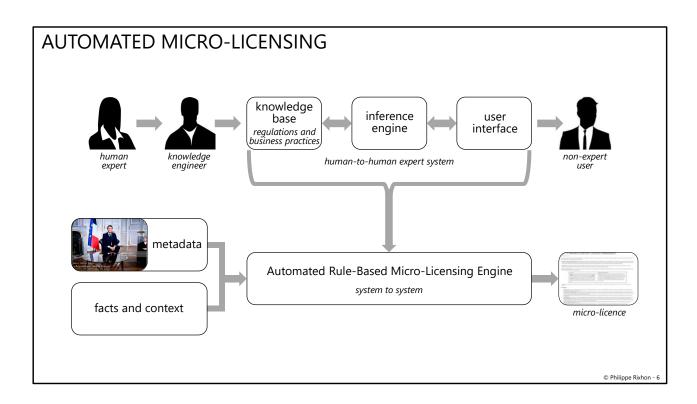
Metadata appears: the names of the photographer, Stephane de Sakutin, the publisher, the AFP, and the distributor. I can learn more. I can also buy the right to use the image. That is what I want to do and click on *Getty Images*.



I am now in their Electronic Market for Media Assets. Before buying, I want to have a look at the *licence* and click here.



Everything is already here on the Internet: the content, the metadata, the marketplace, and the licence.

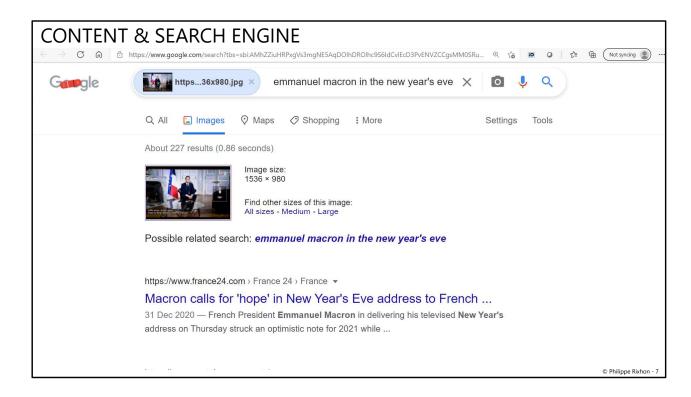


All what we need to build an expert system. A knowledge engineer interviews a human expert and – assisted by machine learning – builds a knowledge base, containing copyright regulations and business practices of creative industries. This knowledge base is interpreted by an inference engine, that communicates with a non-expert through an appropriate user interface. This is a human-to-human system.

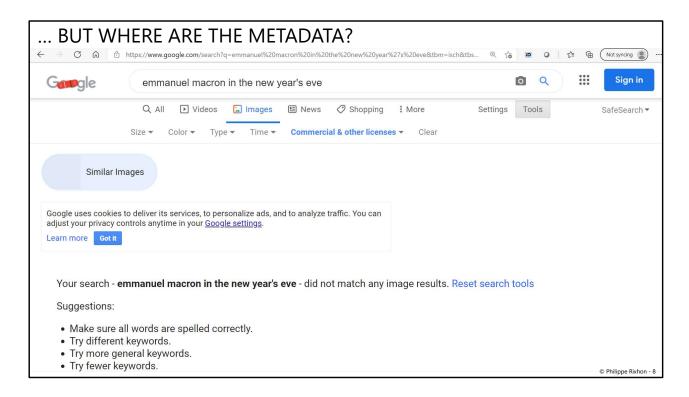
Once tested and stable, this expert system is compiled into an automated rule-based micro-licensing engine. That is a system-to-system tool.

On one side, a system inputs the selected image, its metadata, and facts and context around the required licensing.

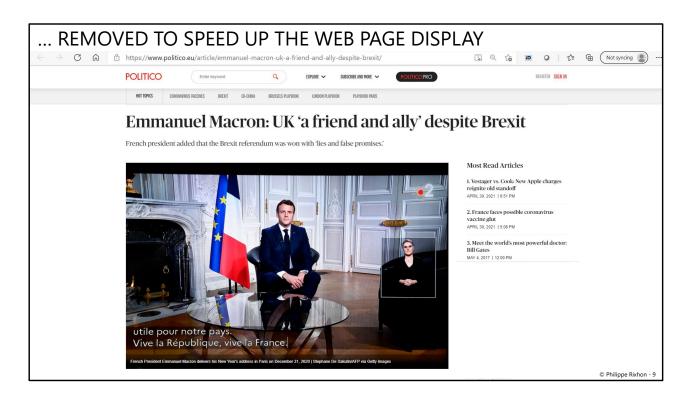
On the other side, the micro-licensing engine produces a machine-and-human-readable micro-licence. This licensing process is simple, accurate, fast, transparent, and affordable. At least, if we have the necessary metadata.



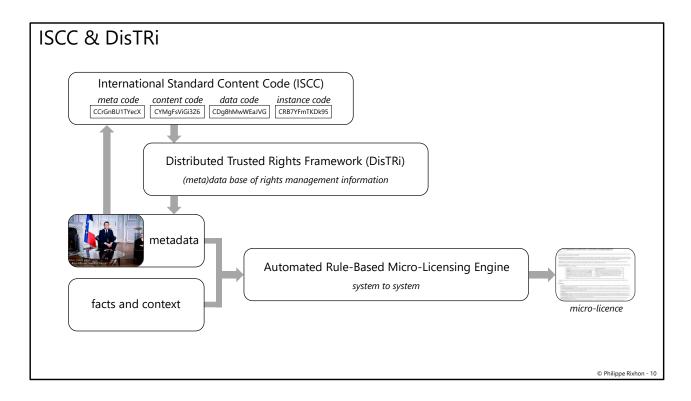
Let us search again the Internet for that specific image of Emmanuel Macron.



No match from this particular search, neither image nor metadata. But we know that there is metadata for that image.



Somewhen, somewhere they have been removed – not necessarily with a bad intention.



What can we do now?

We can analyse the DNA of the image, typically by using an open content-based identification tool such as the International Standard Content Code. It will produce a series of cryptographic hashes – from abstract and persistent characteristics on the left to concrete and volatile attributes on the right.

With that DNA, we can query a public copyright infrastructure to retrieve the rights management information concerning the famous image, relying typically on the content binding protocol of a framework such as DisTRi.

We reconcile image and metadata, and can fire the micro-licensing engine.

Traditional media companies have lost billions of Euros in advertising revenues to the online platforms. One would need only a fraction of that to build the systems outlined today. Then, the press publishers could insist on transparency, leverage their new knowledge of consumption data, and restore a level-playing field to price the micro-licences to their correct value.