

EGROUP

Beyond the AI Illusion: New Frontiers in Fact-Checking Visual Content



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Csaba Körmöczi
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Riga, Latvia, Disinfo2024
2024-10-09

Fighting against disinformation

We see that...

- embedded **photos** and **videos** are often used to support **fake news**, **conspiracy theories** or a **hoax**;



https://web.archive.org/web/20080918041131/http://www.museumofhoaxes.com/hoax/photo_database/image/tourist_guy/



HOME	FORUM	REGISTER	LOGIN	HOAXIPEDIA	TOP 100 APRIL FOOLS	COLLEGE PRANKS	ABOUT THE CURATOR
A HISTORY OF HOAXES	HOAX WEBSITES	HOAX PHOTO TESTS	GULLIBILITY TESTS	TALL-TALE CREATURES	CONTACT		

Tourist Guy

Status: Fake (composite)

Date: Circulating online since September 2001.

Millions of people shared this photo via email in the weeks following September 11, 2001. A caption claimed the photo showed, *"A simple tourist getting himself photographed on the top of the WTC just seconds before the tragedy ... the camera was found in the rubble!!"*

It was eventually learned that the image was the work of a Hungarian man named Peter Guzli. He had pasted an image of a plane (from a photo by Jonathan Derden which he had found online), into a snapshot of himself posing while visiting the World Trade Center's observation deck in 1997.

References:

[Tourist Guy](#), Hoaxipedia.

November, 1997

Péter Guzli, the tourist guy on WTC.

https://en.wikipedia.org/wiki/Tourist_guy

Fighting against disinformation

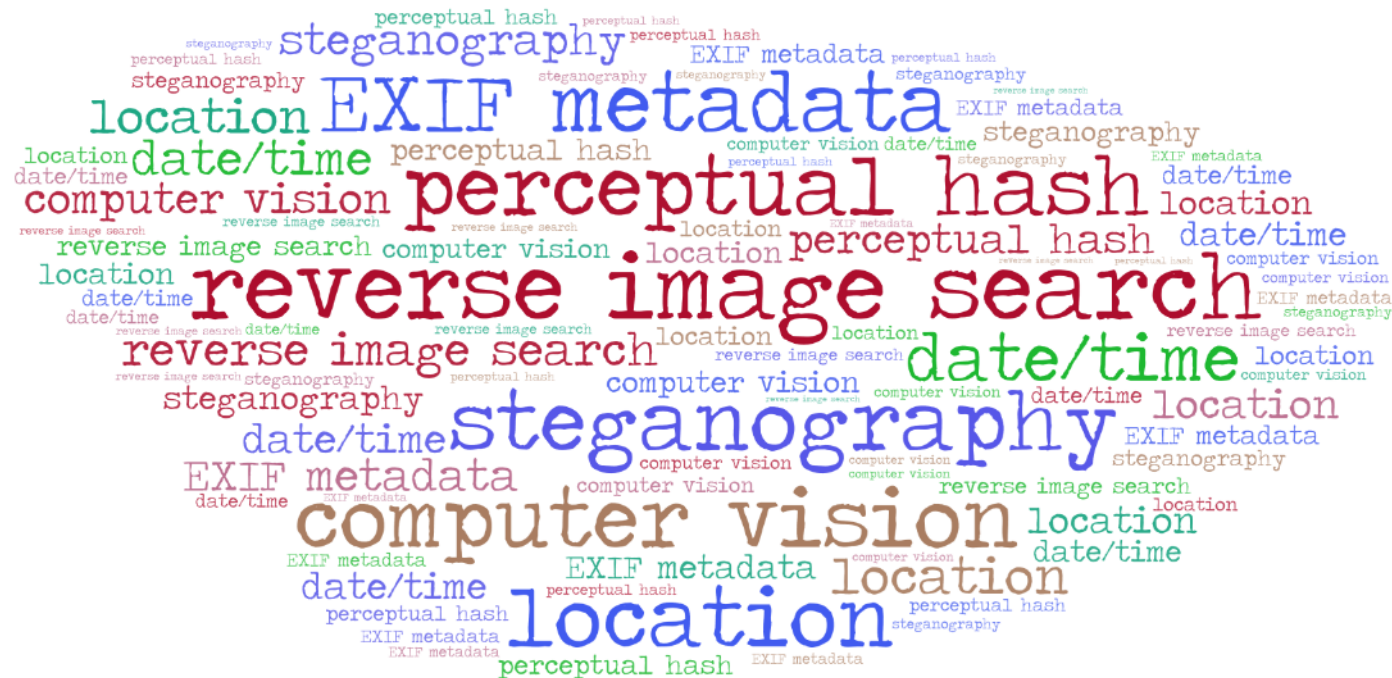
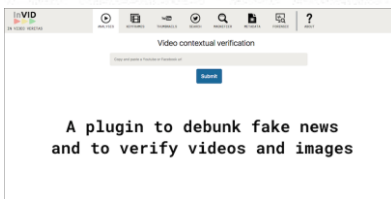
We see that...

- embedded **photos** and **videos** are often used to support **fake news**, **conspiracy theories** or a **hoax**;
- analysis of **photos** and **videos** (with/without the textual content) is important for **fact-checking**;

Perma.cc 



In video veritas



INTERNET ARCHIVE
WayBackMachine

EXIF.tools

<https://exif.tools/upload.php>

GPS Latitude	47° 30' 37.25"
GPS Longitude	19° 2' 14.23"
GPS Time Stamp	10:00:00
GPS Date Stamp	2024:06:01
GPS Date/Time	2024:06:01 10:00:00Z
GPS Position	47° 30' 37.25", 19° 2' 14.23"

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We see that...

- embedded **photos** and **videos** are often used to support **fake news**, **conspiracy theories** or a **hoax**;
- analysis of **photos** and **videos** (with/without the textual content) is important for **fact-checking**;
- the rapid evolution of **generative AI** makes **fact-checking** of photos and videos nearly **impossible**;



March, 2023

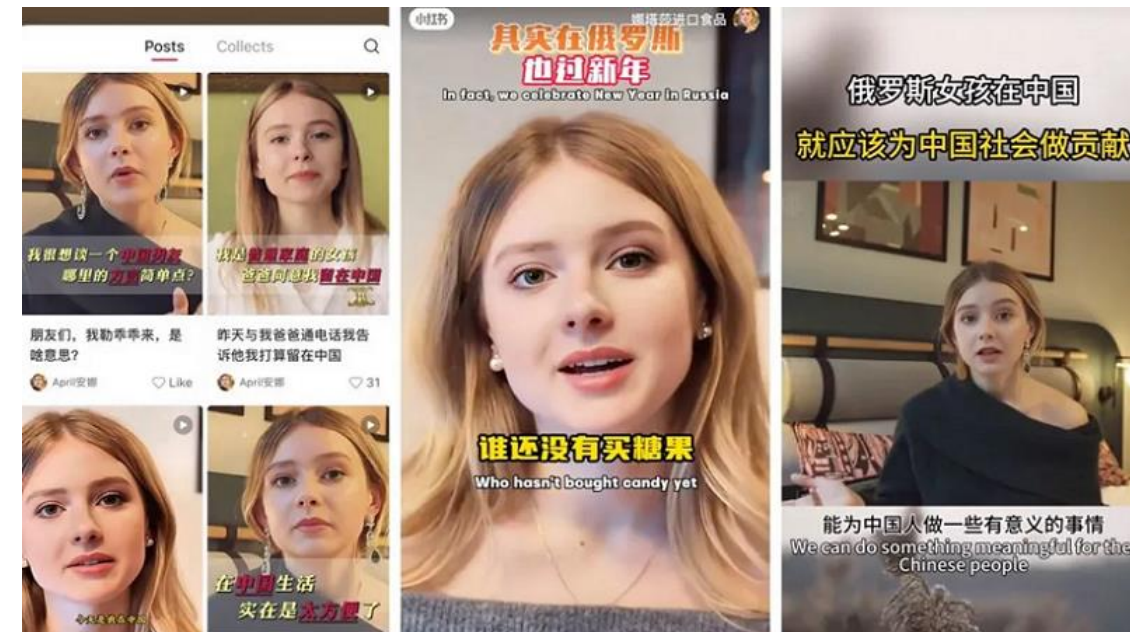
Will Smith eating spaghetti.

<https://arstechnica.com/information-technology/2023/03/yes-virginia-there-is-ai-joy-in-seeing-fake-will-smith-ravenously-eat-spaghetti/>

May, 2024

Olga Loiek promoting invaders.

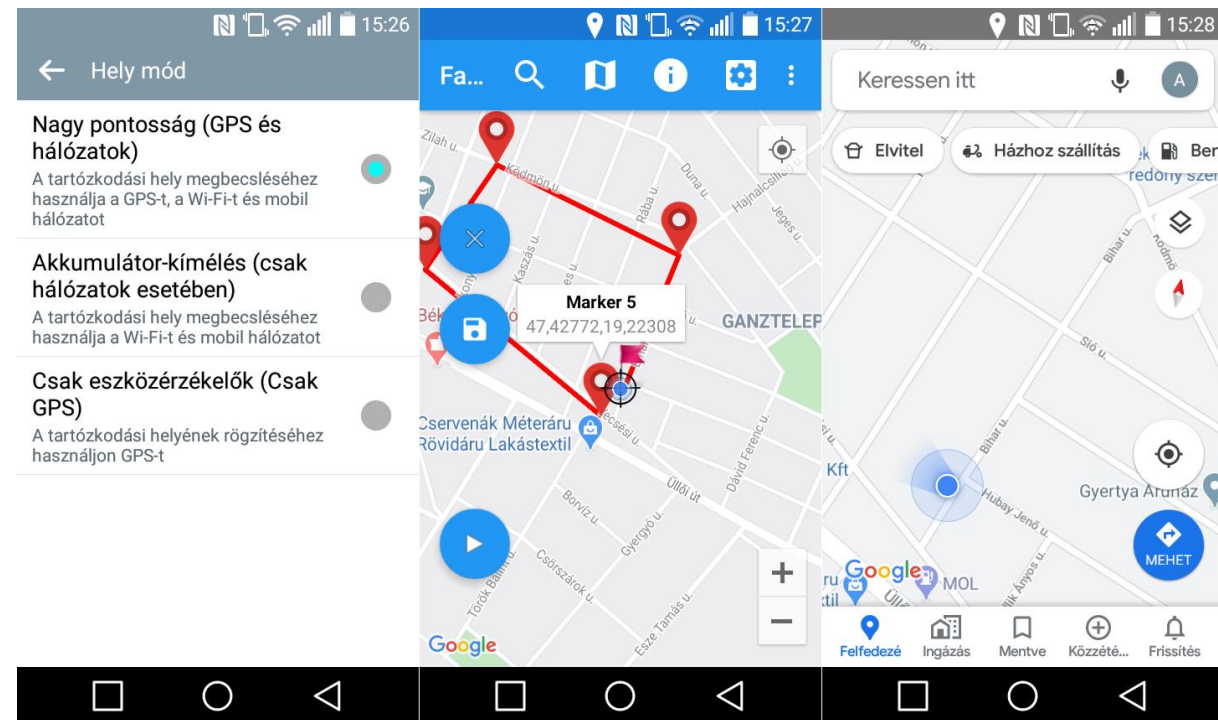
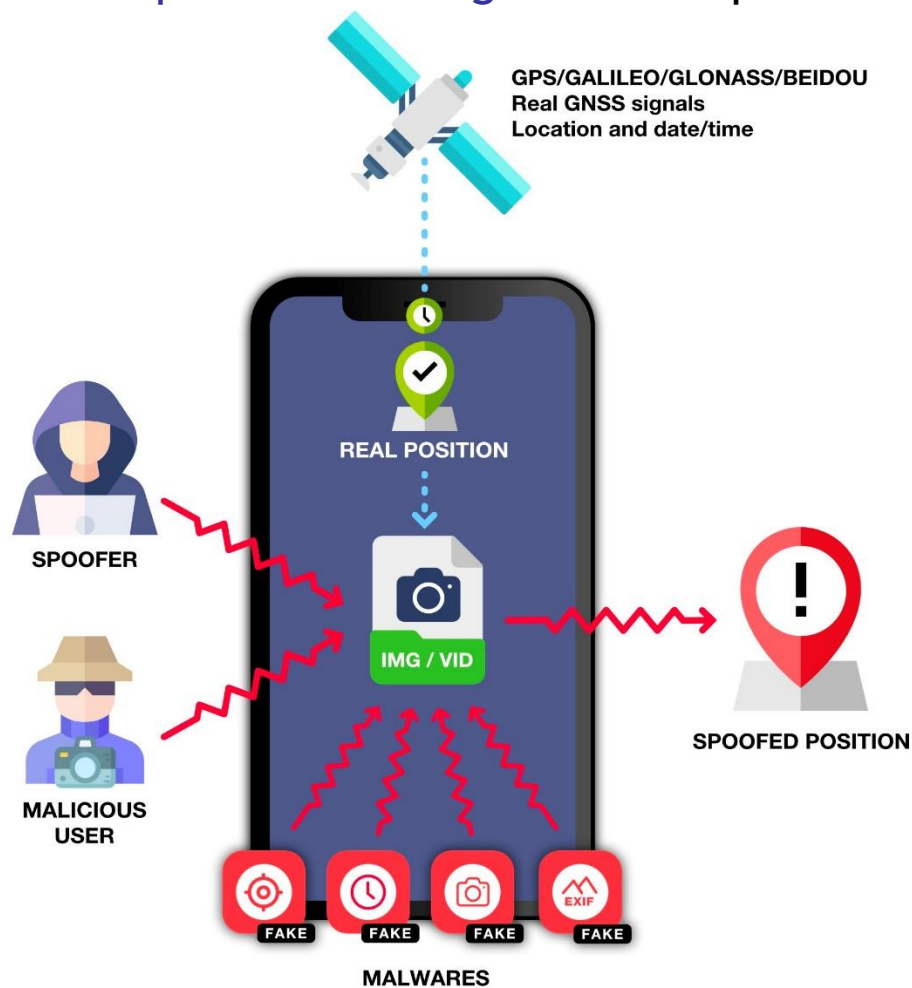
<https://www.bbc.com/news/articles/c25rre8ww57o>



Fighting against disinformation

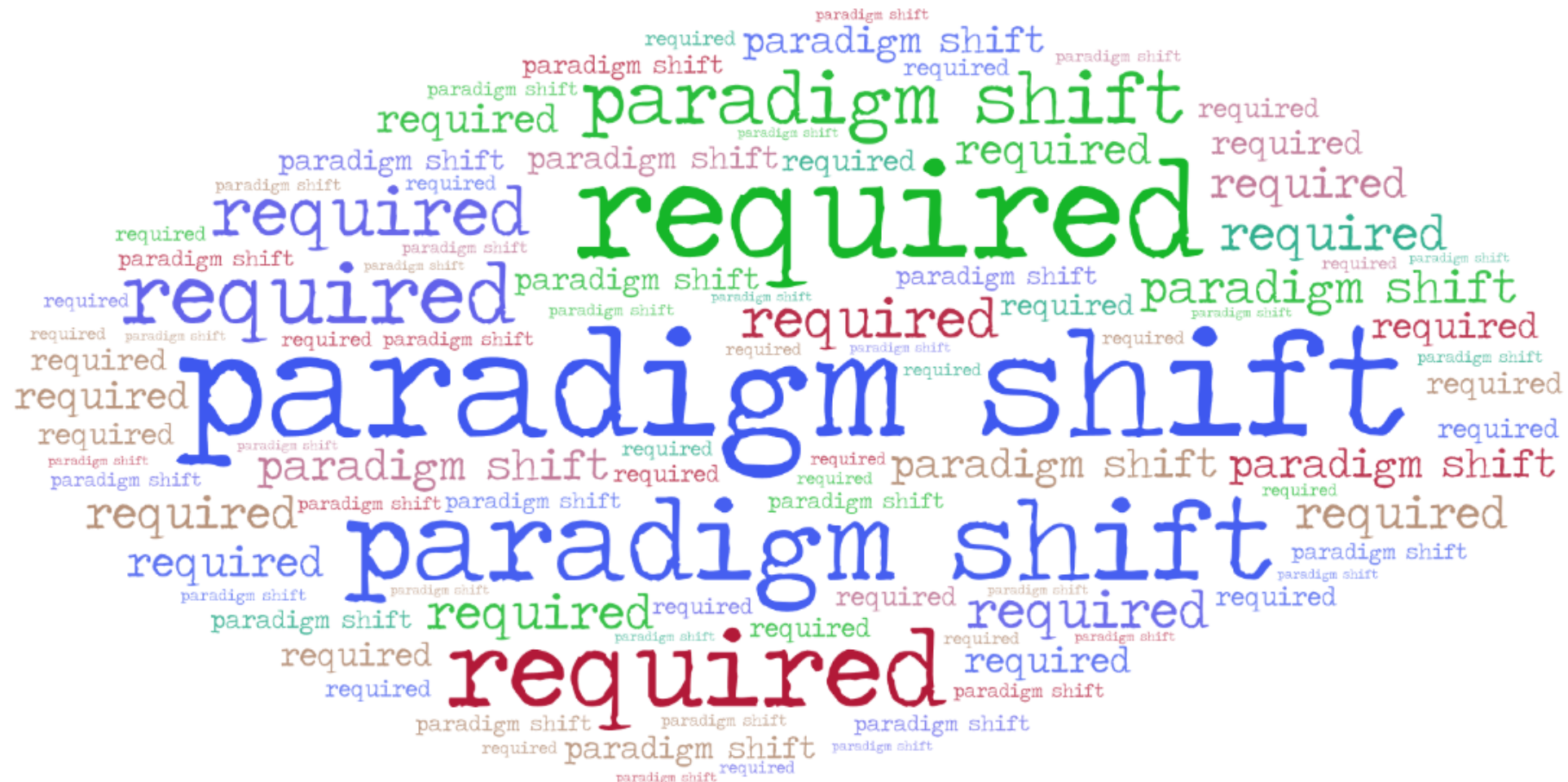
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- embedded **photos** and **videos** are often used to support **fake news**, **conspiracy theories** or a **hoax**;
- analysis of **photos** and **videos** (with/without the textual content) is important for **fact-checking**;
- the rapid evolution of **generative AI** makes **fact-checking** of photos and videos nearly **impossible**;
- the **required knowledge level** for performing modification of location and date/time **is getting very low**.



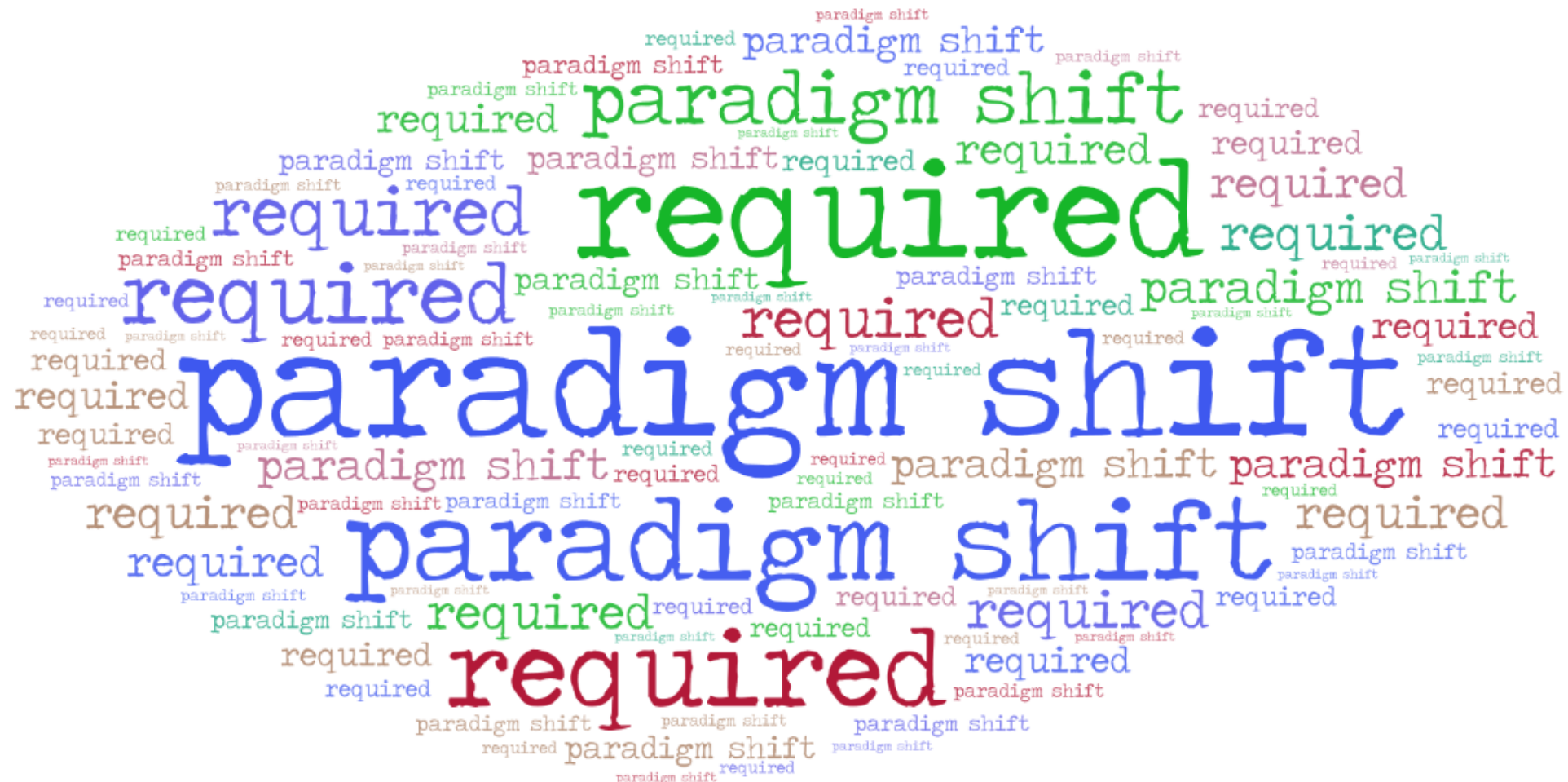
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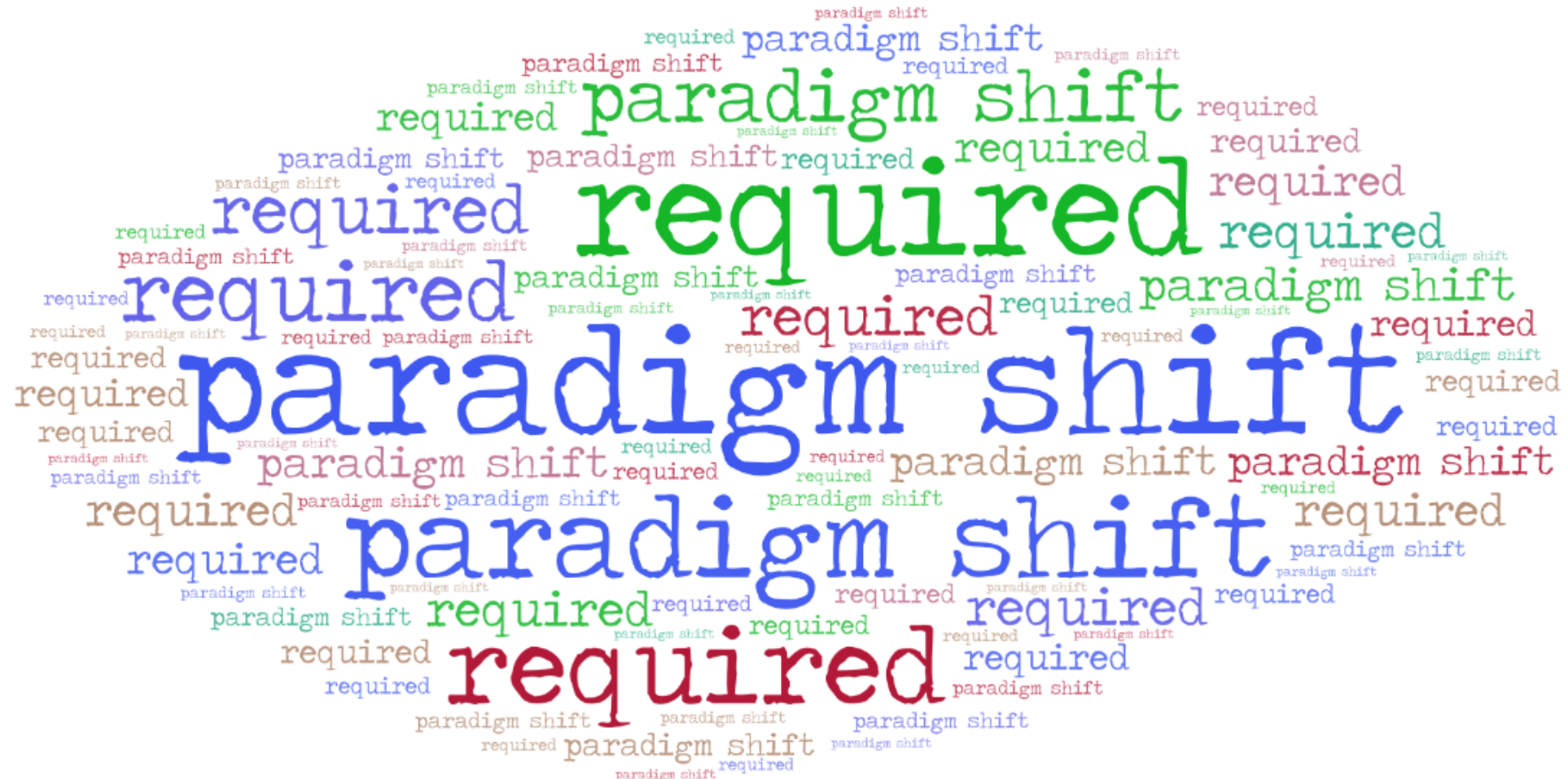
We see that...

- authentic location and date/time data of GALILEO satellites have to be embedded (cryptography);



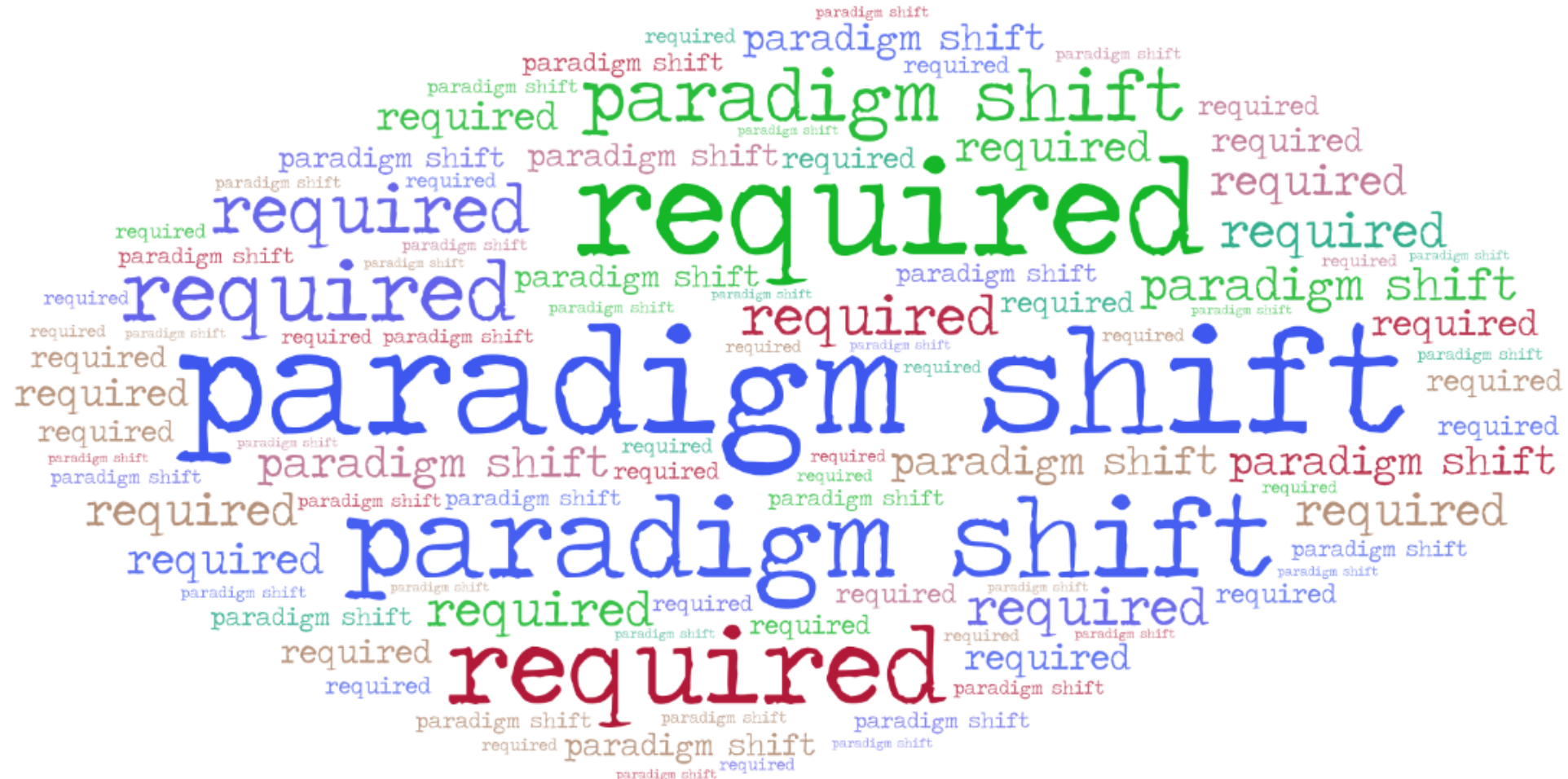
We see that...

- **authentic location and date/time** data of GALILEO satellites have to be embedded (cryptography);
- **reverse image search** shall be improved in order to find original content easier (steganography, perceptual hash);



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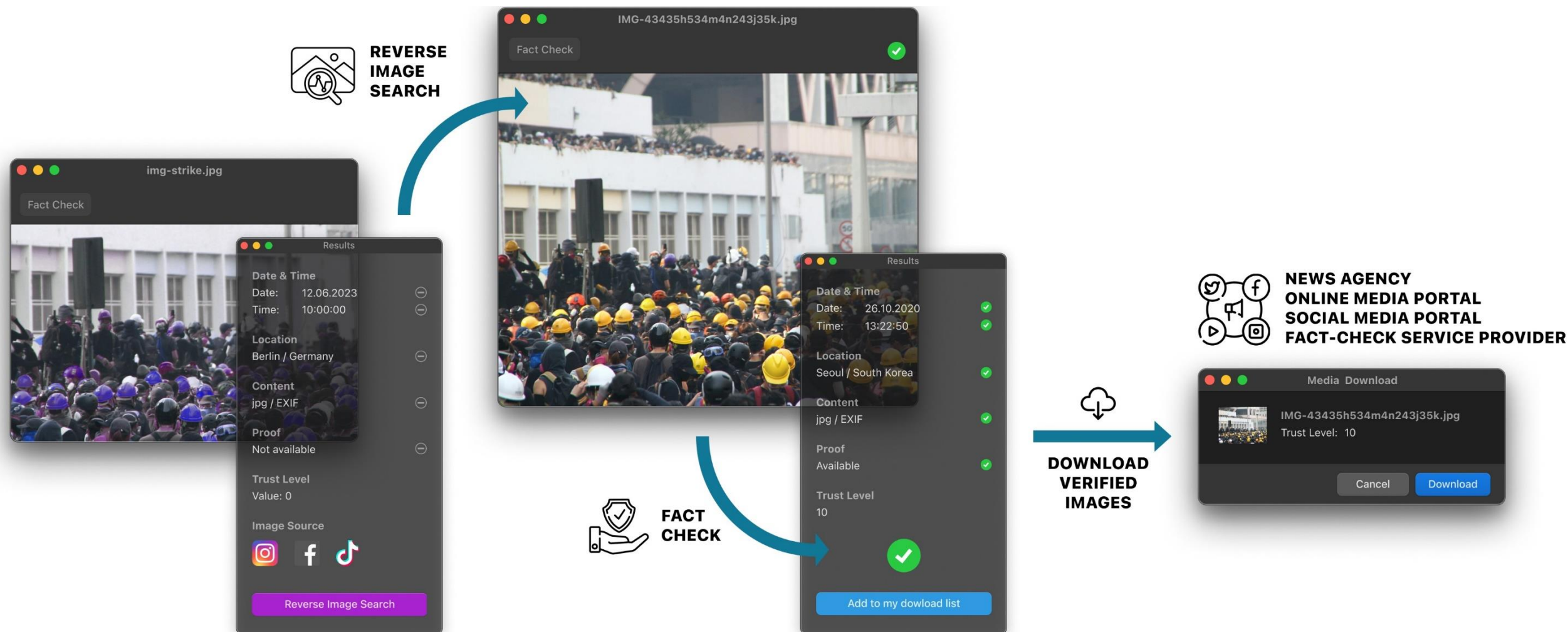
- authentic location and date/time data of GALILEO satellites have to be embedded (cryptography);
- reverse image search shall be improved in order to find original content easier (steganography, perceptual hash);
- correlation analysis of textual and visual content shall be performed automatically (NLP, computer vision).



Fighting against disinformation

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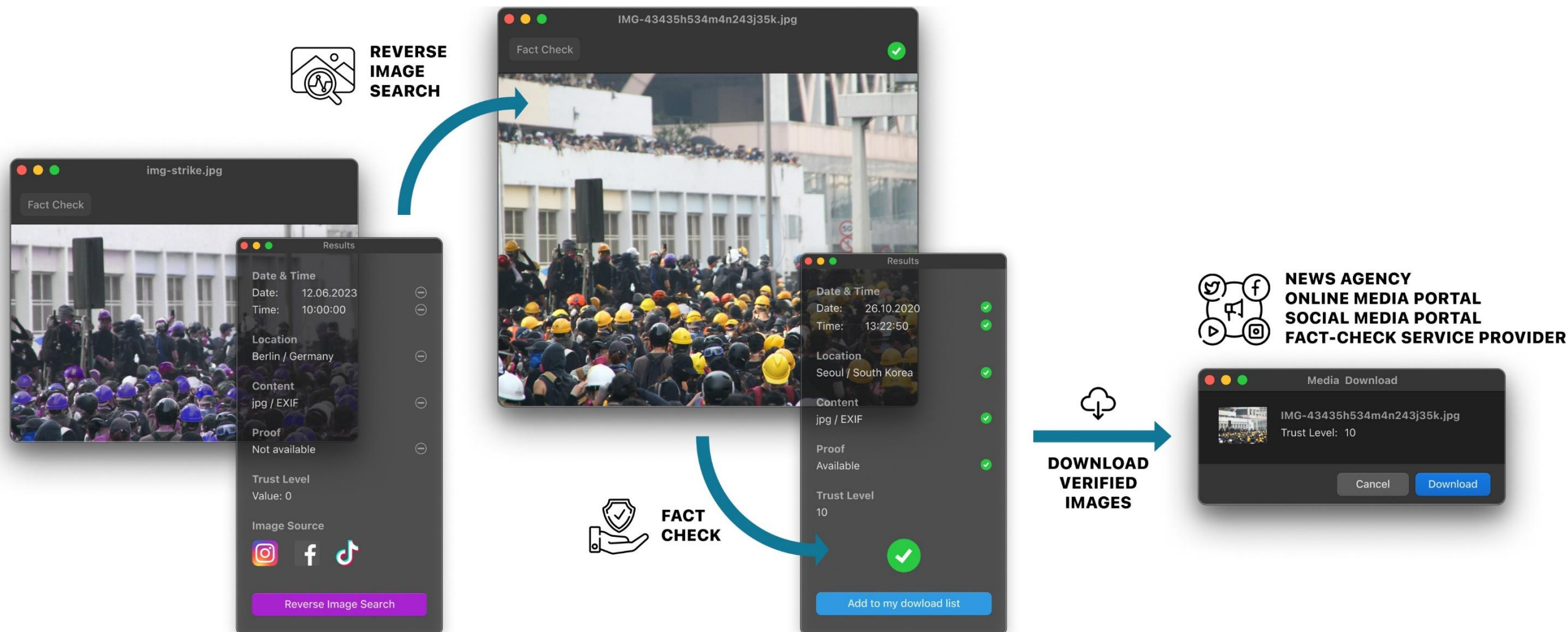
- **pre-verification** will be needed **instead of post-verification** for successful fact-checking of photos and videos!



Fighting against disinformation

We see that...

- **pre-verification** would cover not just **authenticating** the **content** but also the **content creator** (eIDAS KYC/CDD)!



Thank you!

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