



# VIDENTIFIER

Fast & Scalable Video and Image Identification



Founded in 2008, Videntifier is the result of a joint research project with IRISA-CNRS in Rennes, France aimed at the intersection of computer vision and database technology



# Technology – SIFT fingerprint generation

1



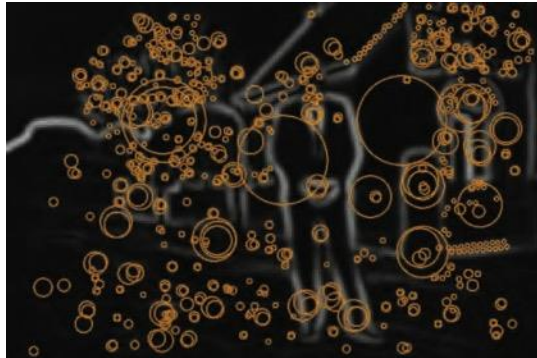
2



3



4



Original image with fingerprints overlaid

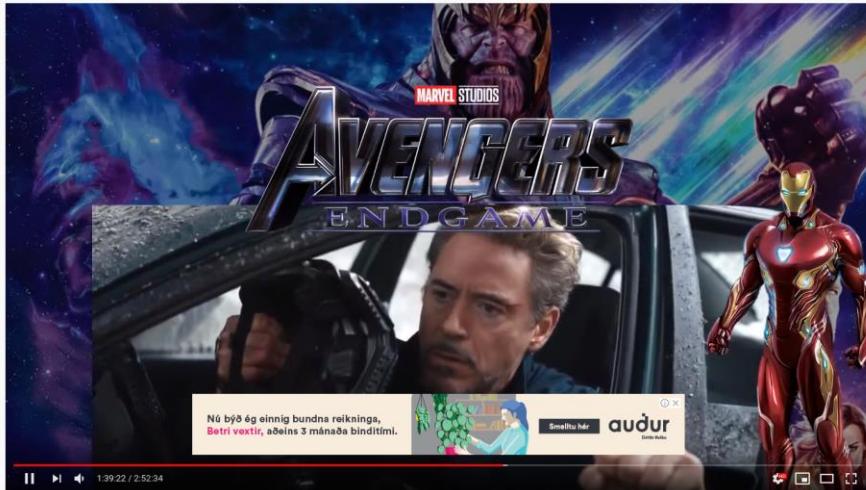


## Technology – Robustness and cross format matching



## Customers and Partnerships





#avengers #endgame #marvelstudio  
 Avengers Endgame Full Movie English HD 720P(2019)-Avengers 4 THANOS,IRON MAN,THOR,CAPTAIN

22,965 views · Nov 18, 2019

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Avengers Endgame Full Movie English HD 720P(2019)-Avengers 4 THANOS,IRON MAN,THOR,CAPTAIN,AMERICA,HULK,SPIDER MAN,BLACK WIDOW,HAWKEYE,ANT MAN,CAPTAIN MARVEL,NEBULA #avengers #endgame #marvelstudio #fullmovie  
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Together Forever 1 day ago  
 Leave like if your happy this is free!  
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## Customers and Partnerships

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# VIDENTIFIER™

Safeguarding the Internet

*[pall.gunnarsson@videntifier.com](mailto:pall.gunnarsson@videntifier.com)*

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**Cyber Data**  
COALITION



# VIDENTIFIER



Query image

Image in database



Query image

Image in database



Query image

Image in Database



Query image

Image in database



Query image

Image in database



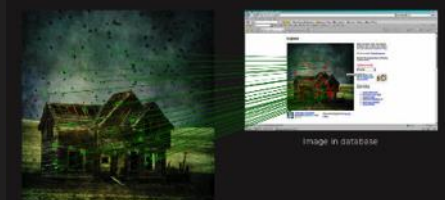
Query image

Image in database



Query image

Image in Database



Query image

Image in database



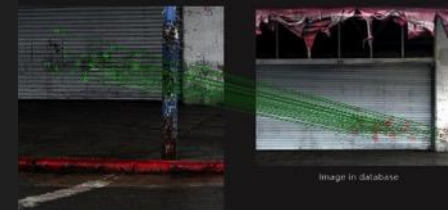
Image in database

Query image



Query image

Image in Database



Query image

Image in database



Query image



Image in database



Query image



Image in database



Query image

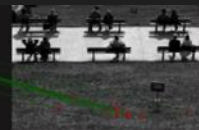


Image in database



Query image



Image in database



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Image in database



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Query image



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Image in database



Query image



Image in database



Query image



Image in Database

## SIFT

- [https://en.wikipedia.org/wiki/Scale-invariant\\_feature\\_transform](https://en.wikipedia.org/wiki/Scale-invariant_feature_transform)
- Available to use, free of charge, globally, with the exception of NA.
- Available to use, free of charge, globally, as of March 2020.
- This provides opportunity for interoperability in the field of copyright protection, while preventing vendor lock in.
- The fingerprints are a one way hashing with no way to recreate content.

## Local descriptors Vs. Global descriptors

- Local descriptor technologies (such as SIFT), can contain hundreds of key points/descriptors in a single frame, together combined into a fingerprint. This allows for very robust matching to modified content and it is capable of partial matches. This also means, that for videos, the key points between frames can be merged, compressing the size of a fingerprint for an hour of video, to the size of a fingerprint for 200 images.
- Global descriptors, on the other hand, are calculated on a frame by frame basis. Meaning that if a frame is modified, they have a very hard time matching the original content.

## Drawbacks of local descriptors & the Videntifier solution

- Local descriptor technologies (such as SIFT), as they can contain hundreds of key points per frame, are computationally expensive and "heavier" than global fingerprints.
- Videntifier has solved this problem with its' database technology. The fingerprints can be deployed at a competitive computational cost to other technologies and at the scale of even the biggest platform.

## Our key competitive advantage

### Unparalleled Lookup Speed

A single **mid range server** can store up to **200.000 hours** of videos and a single frame can be found within the dataset in **25-30 milliseconds**. It is possible to search on the order of **10.000 hours of video a day**.

