ELETEK

When terabytes become too much:
from forensic imaging to AI-powered multimedia analysis

eletek.ru

Eletek



OPEN-SOURCE DATA SEARCH
AND COLLECTION SYSTEMS



AI SYSTEMS FOR HETEROGENEOUS
DATA ANALYSIS



SPECIALIZED TECHNICAL AND
FORENSIC TOOLS



SECURE AUTOMATED SYSTEMS



DATA CENTERS AND ENGINEERING
INFRASTRUCTURE

Forensic imaging tools

Element-FS

Designed to automatically copy data from external 2.5-inch and 3.5-inch HDDs and SSDs:

- **Hardware write blocking**
  Connects examined drives in read-only mode
- **Multiple copying modes**
  Sector-by-sector imaging, cloning, all files, or file masks
- **5 GHz Wi-Fi module**
  Wireless control via a mobile app
- **Pass-through copying**
  Copies data to an external trusted drive
- **Internal storage**
  Supports installation of high-speed internal storage



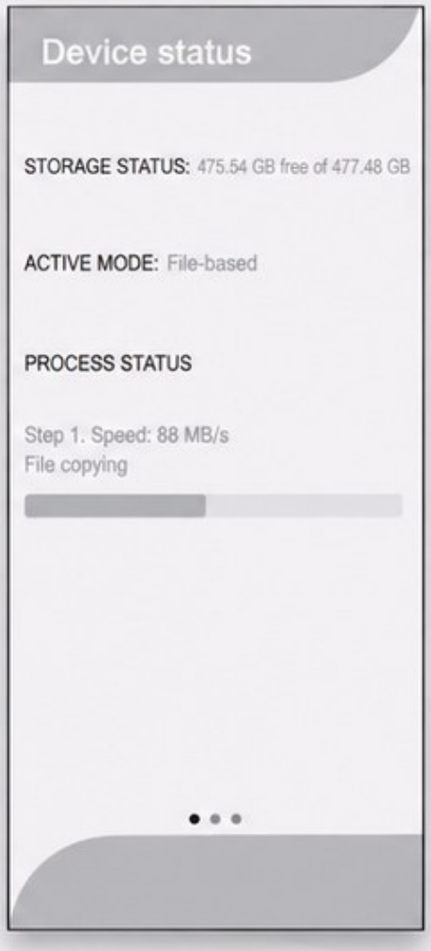
Element-FM

Designed for standalone copying of data from flash drives:

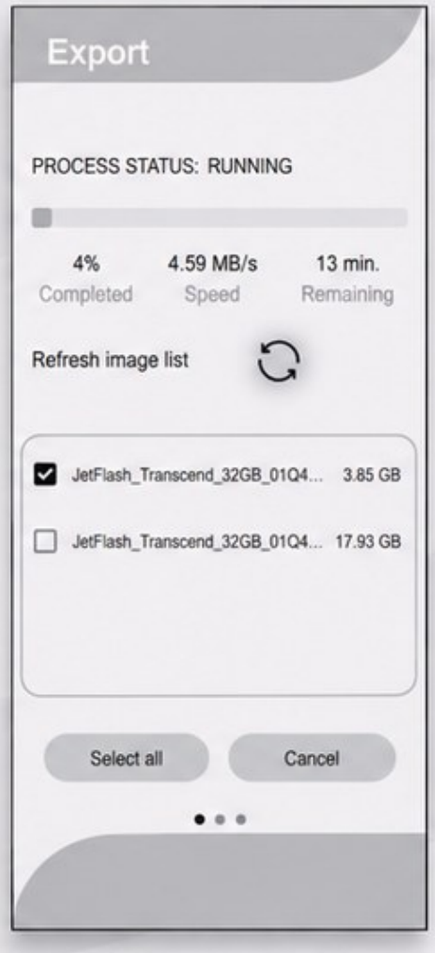
- **Storage capacity**
  Copies data to 512 GB of storage
- **5 GHz Wi-Fi module**
  Wireless control via a mobile app
- **Pocket-sized design**
  Dimensions: 71 × 40 × 33 mm
- **LED status indicators**
  Intuitive indication of operating modes
- **Battery life**
  Up to 2 hours at maximum copying speed



Mobile control app







SATA Write Blocker

Blocks write commands (read-only mode) on connected 2.5-inch and 3.5-inch HDDs and SSDs:

- **Hardware write blocking**
  Connects examined drives in read-only mode
- **Universal PC connection**
  Connects to the forensic workstation via USB 3.0
- **SATA interface**
  Examines devices connected via SATA
- **External 12 V power**
  External power adapter for 3.5-inch hard drives
- **Compact design**
  Dimensions: 80 × 60 × 20 mm



USB 3.0 Write Blocker

Blocks write commands (read-only mode) on connected flash drives and SSDs:

- **Hardware write blocking**
  Connects examined drives in read-only mode
- **Universal PC connection**
  Connects to the forensic workstation via USB 3.0
- **USB 3.0 interface**
  Examines devices connected via USB 3.0
- **Compact design**
  Dimensions: 67 × 45 × 23 mm



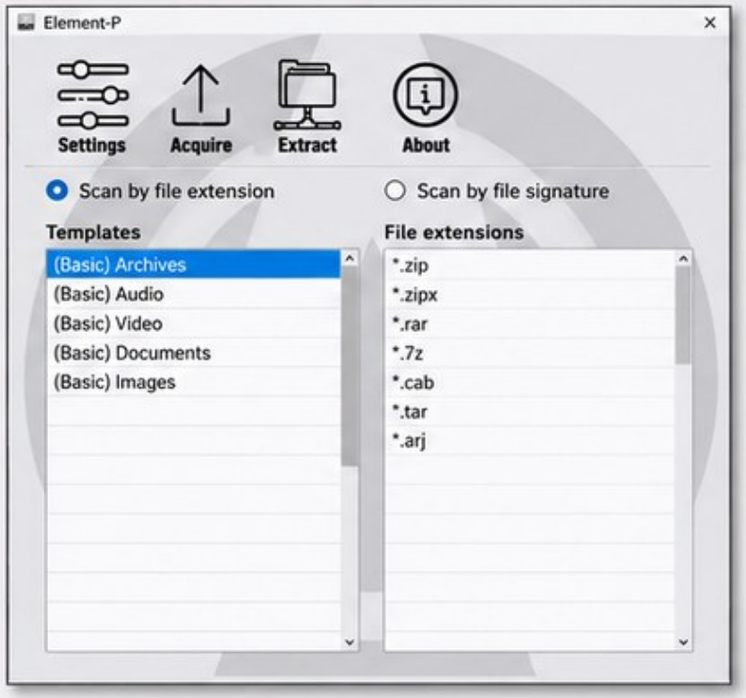
Element-P

Designed to find and save information from a live computer under examination:

- **Search by MIME type**
  Finds and saves files with specified MIME types
- **Search by file mask**
  Finds and saves files matching specified masks
- **Search by path**
  Finds and saves files from user-defined paths
- **Operating systems**
  Works with Windows and Linux file systems



Software interface







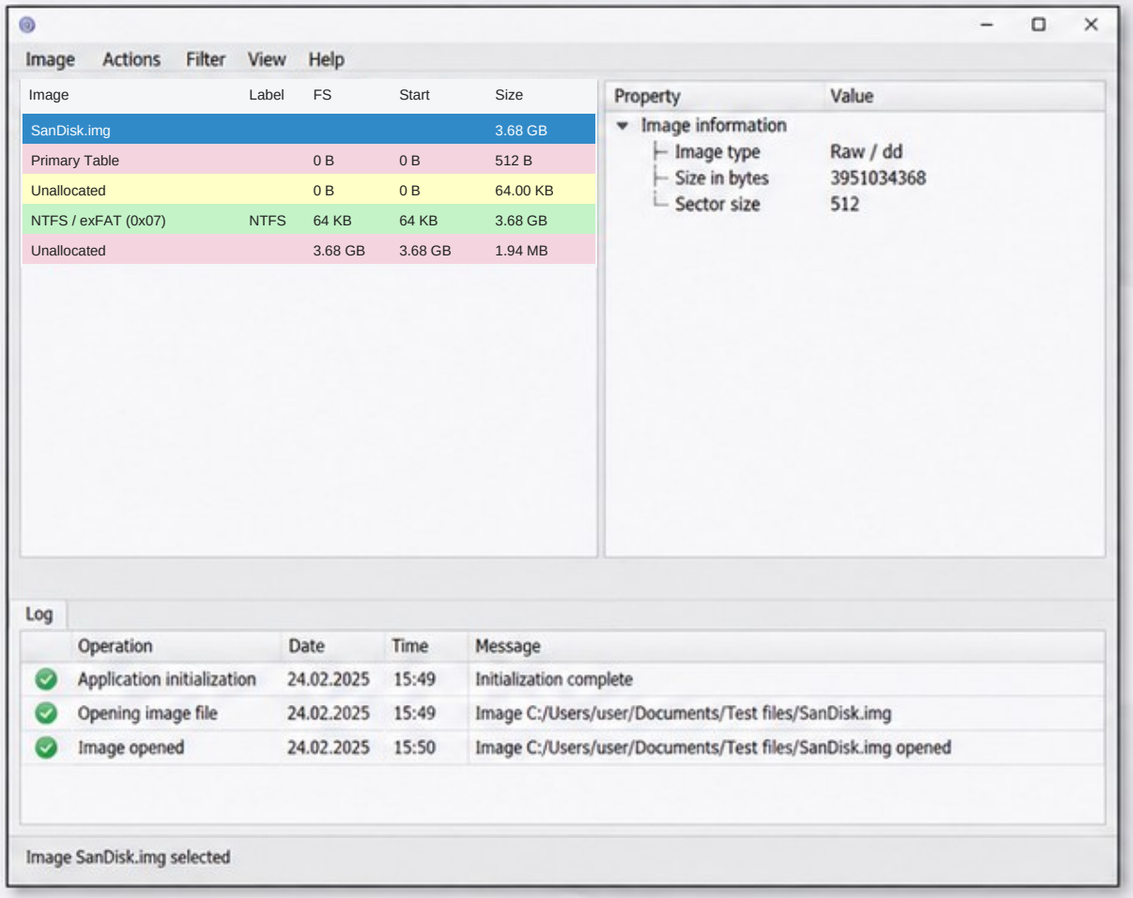
Element-VD

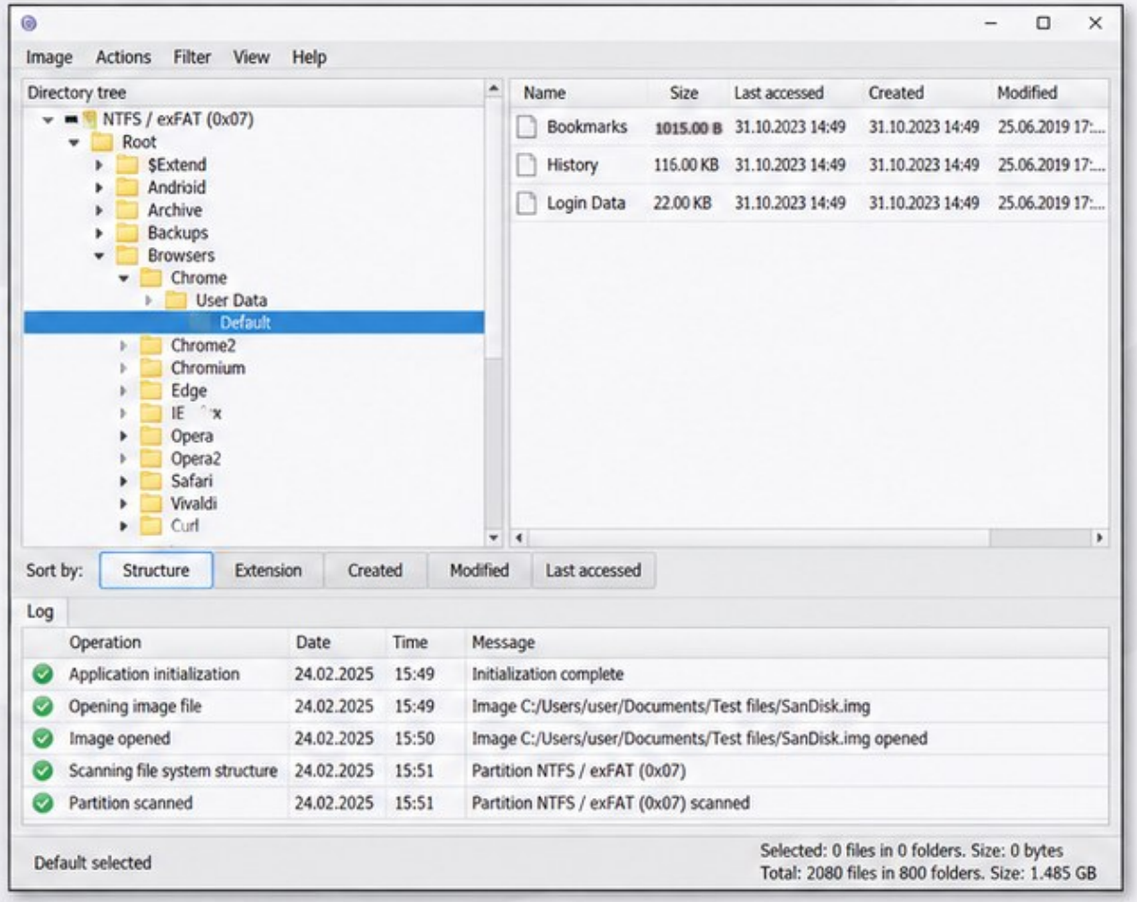
Designed to find and recover deleted files in disk images and on physical drives:

- **Signature-based search**
  Finds and recovers files using known file signatures
- **File system metadata search**
  Finds and recovers files by analyzing file system metadata
- **Resume scanning sessions**
  Saves scan results to a file and reloads them for further work
- **Operating systems**
  Runs on Windows and Linux, including Astra Linux



Software interface





Heterogeneous data analysis

Key stages of data collection and analysis



Data collection
from open and internal
sources



Heterogeneous
data analysis

Use of AI tools



Storage and
multi-user information
retrieval

Heterogeneous data analysis capabilities



Audio data

- Speech recognition and transcription
- Language detection and translation
- Speaker identification
- Summarization of recordings
- Extraction of significant entities (names, organizations, events, etc.)
- Assessment of the speaker's emotional state



Visual data
(images, video)

- Face detection and identification
- Image classification
- Emblem detection and classification
- Classification of objects in images
- Text descriptions of actions in video
- Text recognition in printed and handwritten documents



Text data

- Language detection
- Translation, including adaptation for low-resource languages
- Topic classification
- Detection of duplicates and storylines
- Named entity extraction
- Similar-text search
- Question answering using a knowledge base
- Summarization of texts and dialogues
- Fuzzy name search across languages

Audio processing capabilities

Recording length

Streaming algorithm: Stable memory usage. Processes recordings lasting 24+ hours.

Multilingual support

Multimodality: Recognizes mixed-language speech (several languages at once) and works in high-noise environments, including radio communications.

Adaptability

Adaptability: Context-aware recognition using industry dictionaries and automatic selection of the best language model.

Local analysis

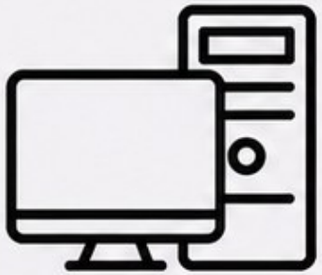
Autonomy: A dedicated application for local viewing and detailed analysis of results.

Deployment options



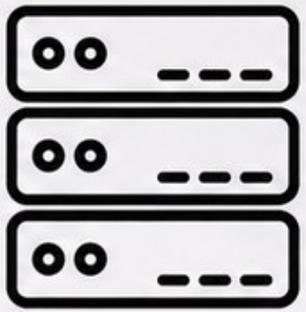
Laptop (5× speed)

Monolingual recording processing and summarization.



Workstation (10× speed)

Multilingual recording processing and summarization.

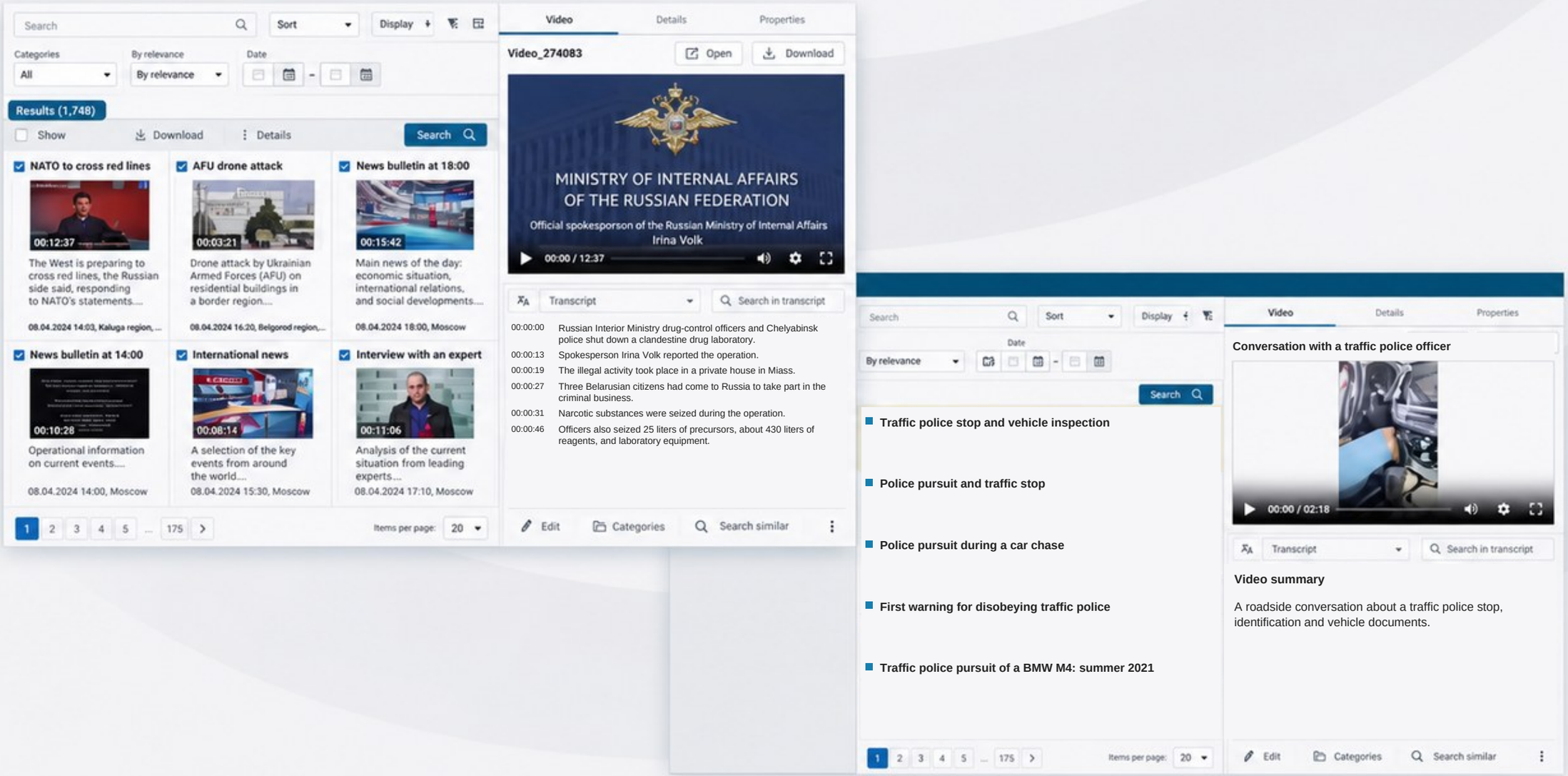


Server (20× speed)

High-speed multilingual processing with support for multiple models per language.

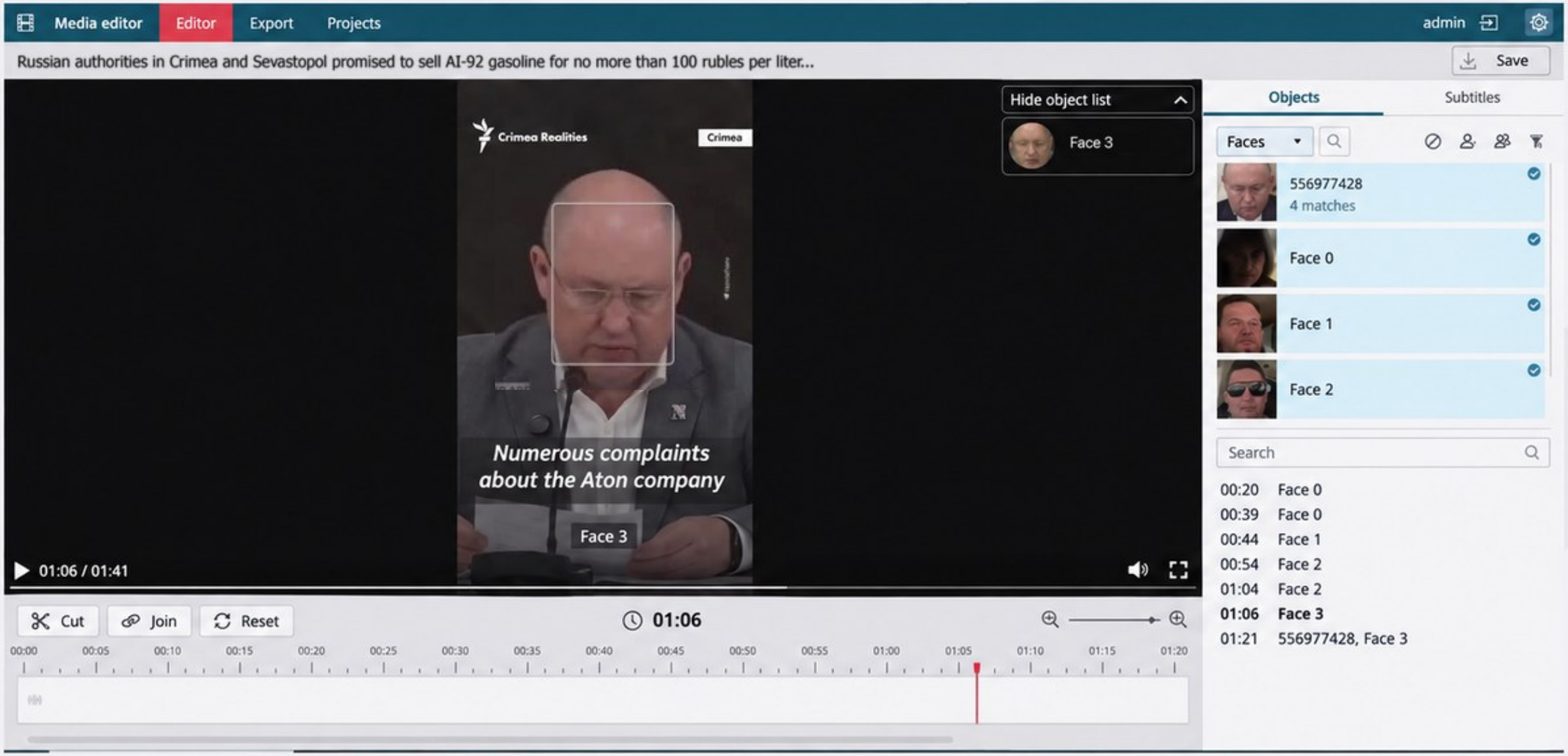
Video processing and multimedia archives

Finding relevant segments in a growing multimedia archive



Video processing

Detecting specified faces, icons, emblems and flags

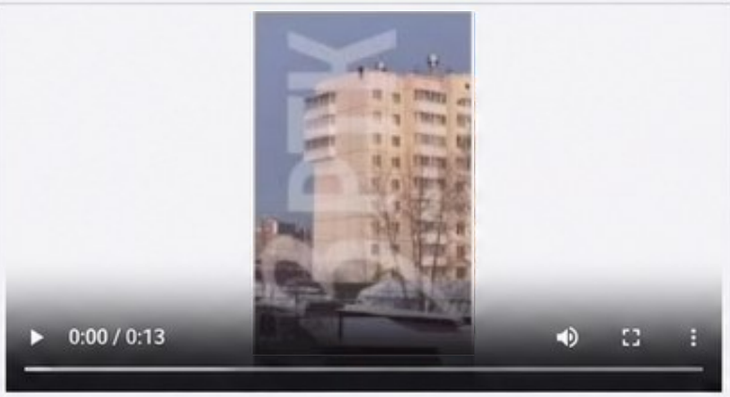


Video processing

Describing actions in video

Details | Properties | Categories

Winter cityscape with an apartment building 3 Edit



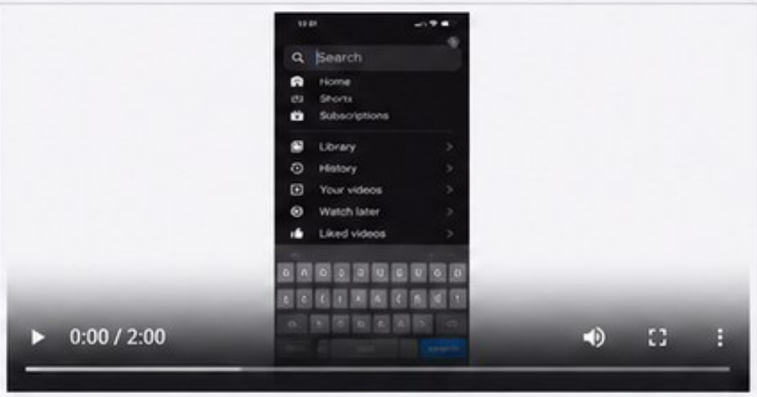
Relevant to query 0/0 All subtitles

00:00:00 The video shows a multi-story residential building in winter. In the foreground are snow-covered rooftops and several leafless trees. A balcony in the upper part of the building is visible, with someone working there. Visibility is good, and sunlight illuminates the scene.

Open Download Search similar

Details | Properties | Categories

Registration on the Kraken website 4 Edit



Relevant to query 0/0 All subtitles

00:00:00 The user enters registration details on the Kraken website, including a username and password. The screen shows the registration form with username and password fields.

00:00:59 The user completes the registration form on the Kraken website. The username is Kvokov001. A confirmation message is displayed. The user then selects Moscow and clicks Continue. An image of heads appears, and the user must arrange them in a specified order to continue registration.

00:01:30 The video demonstrates a mobile application interface, apparently YouTube. The screen shows icons such as buttons, a video title, a description, and controls for interacting with content. It includes the feed, subscriptions, video playback, favorites, and other platform functions.

Open Download Search similar

Image processing

Classification of images and frames

Aerial imagery



Military personnel



Military equipment



Document (text)



Passports and ID cards



Document (text)



Map



License plates



Weapons



Landscape



Portrait



Text recognition in images

Identifying individual document pages in an image

- Document boundary detection model
- Algorithm for analyzing the relative positions of pages

Page analysis and segmentation

- Page orientation detection model
- Text-line layout analysis model
- Adaptive page segmentation and resolution adjustment
- Model for improving text readability

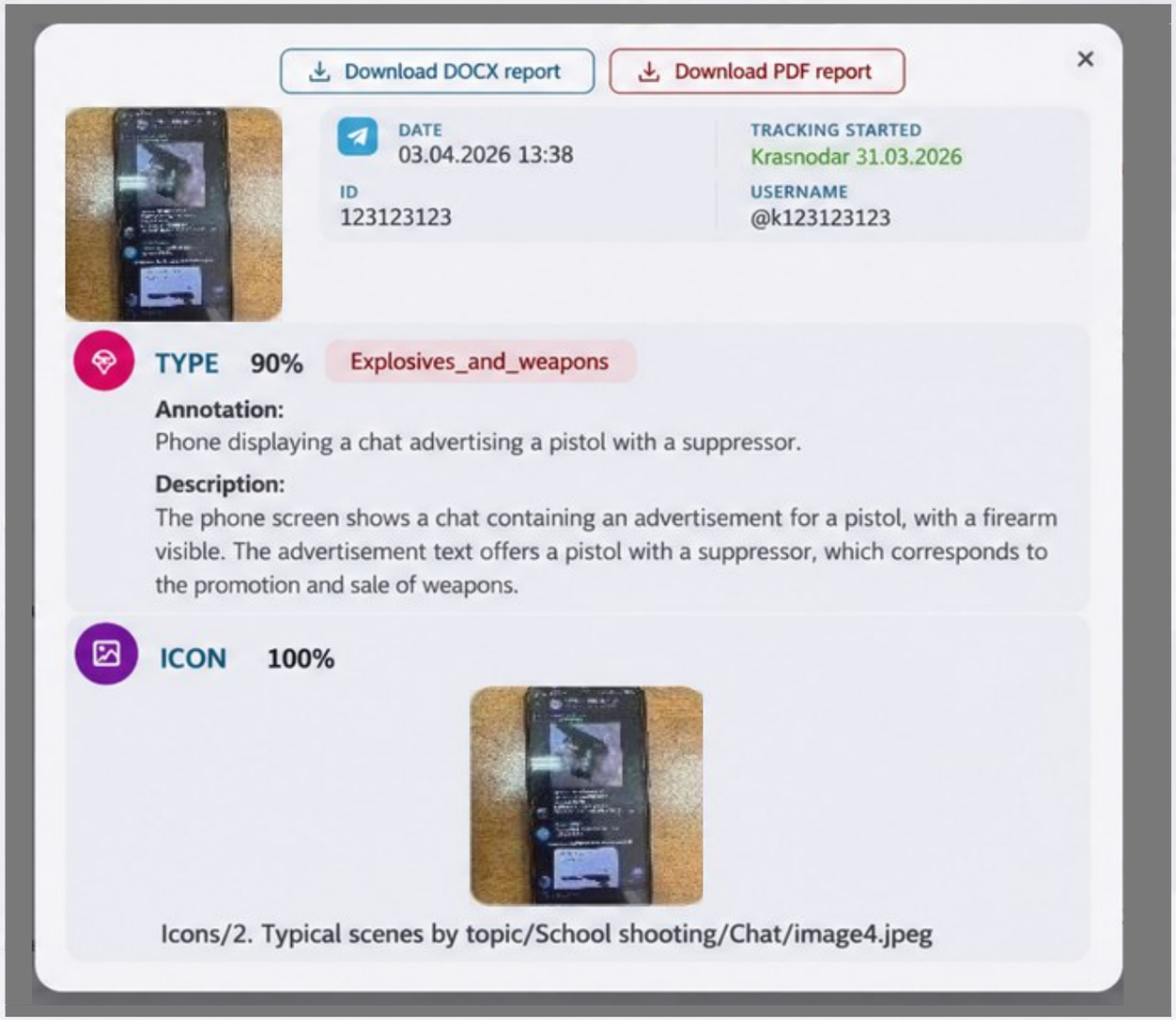
Text recognition and entity extraction from image segments

- Document type detection model
- Vision-language models (VLMs)
- Conventional OCR models
- Algorithm for merging results from individual segments



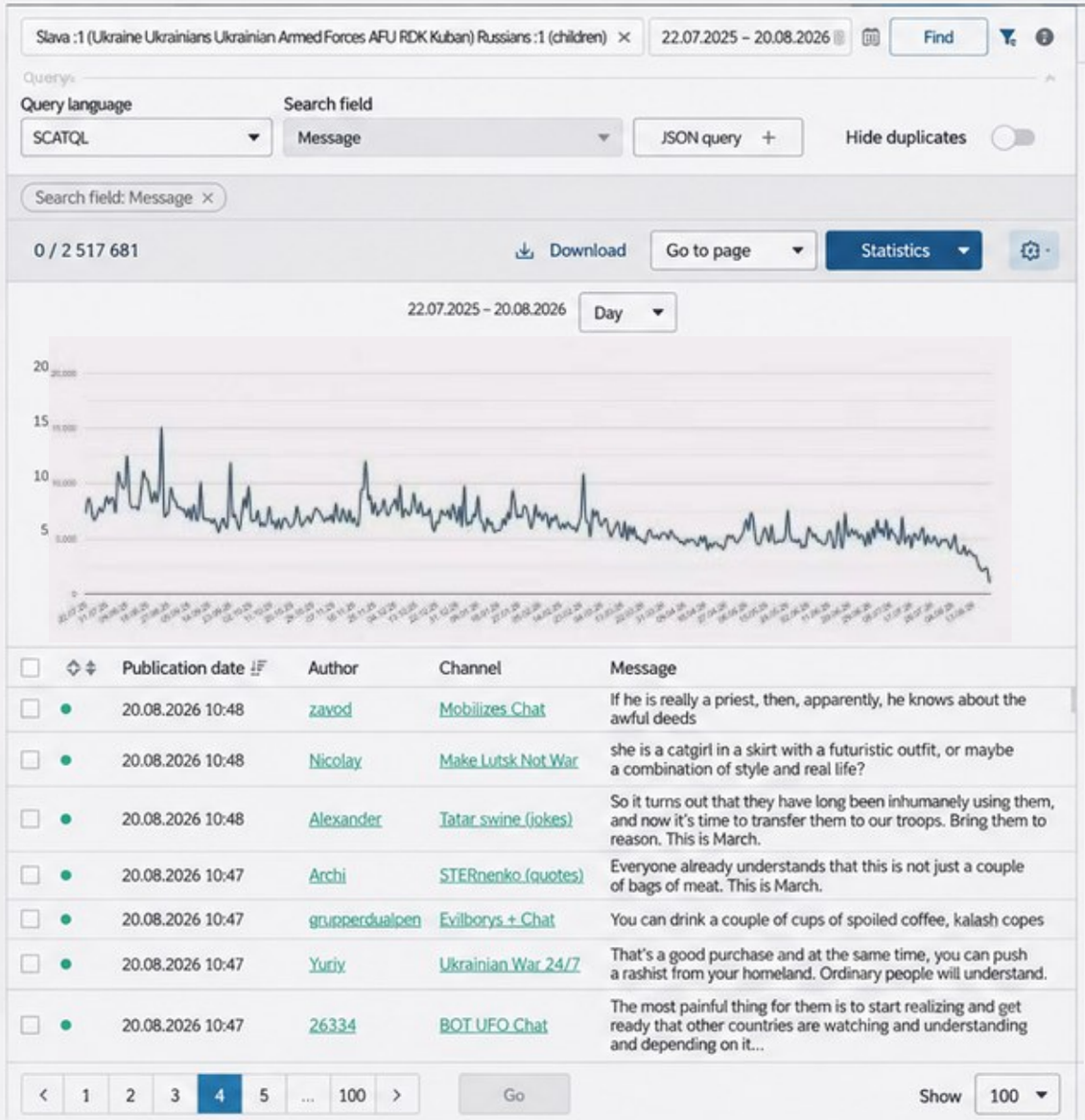
Specialized tasks using the analysis module

Finding significant facts in images



Text analysis by selected topics and areas

- Predefined topic queries
- Dynamically generated topic queries
- Identifying significant messages on a selected topic
- Extracting attributes of significant messages
- Generating statistics and trends in the information landscape



Example topics for text analysis

SOCIAL INTERESTS

Positive

1. Volunteering and charity.
2. State-run channels.
3. Achievements in science and progress.
4. Parliamentary party channels.
5. Patriotic movements and channels.
6. Family and children.
7. Sports and leisure.
8. Creativity and hobbies.

Negative

1. Deviant and aggressive behavior.
2. Depictions of abuse and killings.
3. Child sexual abuse material, etc.
4. Domestic violence.
5. Complaints about social problems.
6. Animal cruelty.
7. Foreign agents.
8. Payment card fraud.
9. Cyberbullying.
10. Columbine / school shooters.
11. Video game addiction.
12. Criminal lifestyle.
13. Smoking, alcohol and drug use.
14. Illegal cash-out schemes.
15. Illegal cryptocurrency transactions.
16. Non-traditional sexual orientation, LGBT propaganda.
17. Informal subcultures and eccentrics.
18. Opposition and calls against the current government.
19. Document forgery.
20. Pornography.
21. Personal data lookups and database leaks.
22. Mobilization, recruitment offices and conscription issues.
23. Propaganda and campaigning.
24. Prostitution, escort services and sexual perversions.
25. Drug distribution.
26. Sects and religious movements.
27. Blue Whale groups and promotion of suicide.
28. Betting and gambling.
29. Anxiety, depression and other disorders.
30. Pyramid schemes and trading.
31. Hacking industry.
32. Environmental organizations.
33. Extremism.
34. Nationalism and fascism.
35. Ukrainian propaganda.

Visualizing heterogeneous data and analysis results

