



Ad Monitoring System

ADKontrol automates the process of logging all occurrences of pre-recorded advertisements on radio and television. The system analyzes a station's audio content and automatically identifies and logs every occurrence of any known ad, documenting its exact time, to the second, with unrivaled accuracy.

ADKontrol is ideal for..

NEWS MONITORING COMPANIES

that want to expand services to include ad monitoring products

AD MONITORING COMPANIES

that want to improve the accuracy and efficiency of current processes

BROADCASTERS

that want to automate the reconciliation of as-run versus schedule

BROADCASTERS

that want to monitor competitors for sales leads and key account budget allocation

REGULATORS

that want to monitor for legal or standards compliance

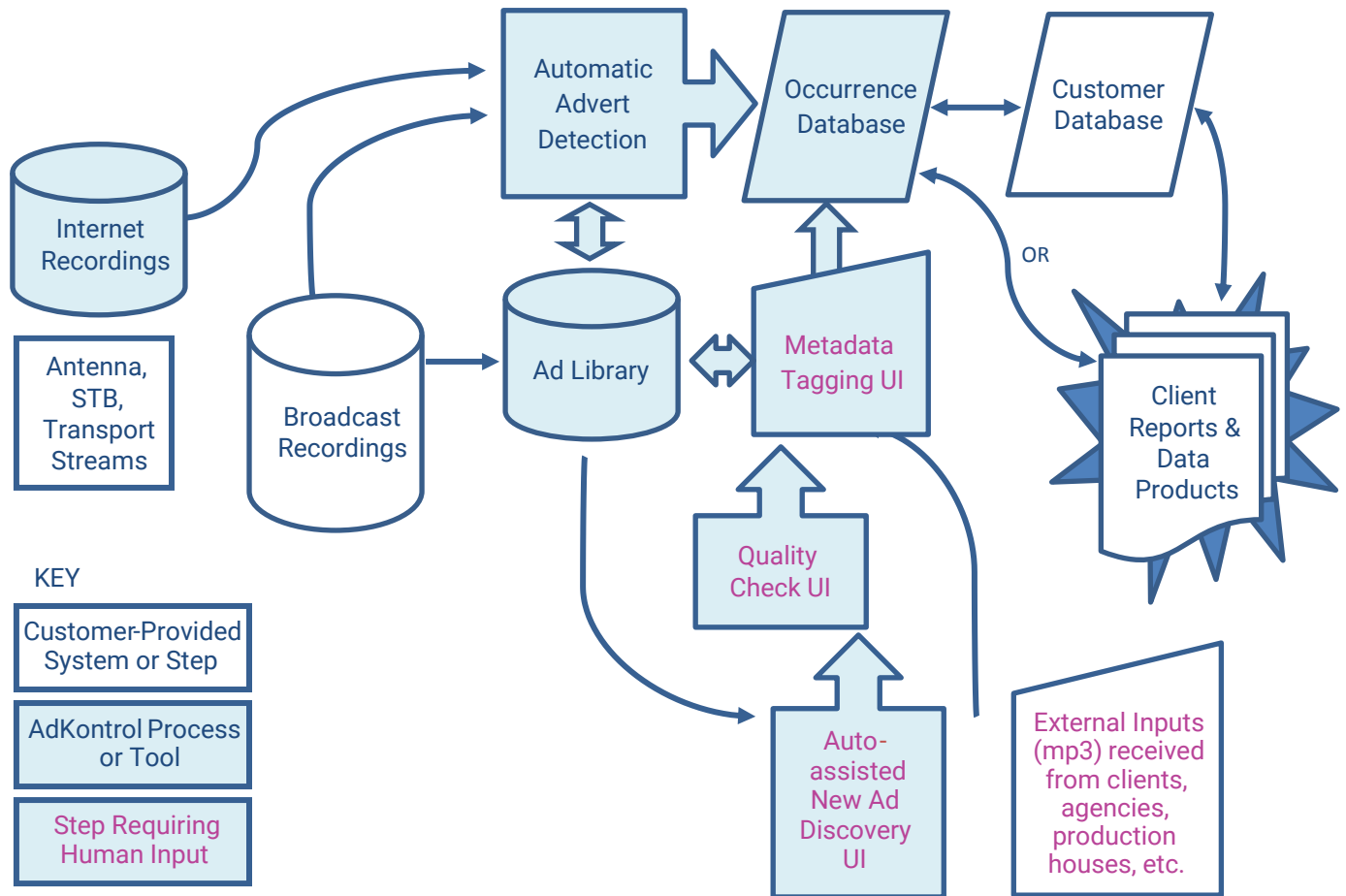
ANY LARGE ENTERPRISE

that wants to build an in-house broadcast content monitoring system

Features and Benefits

- » Unlimited numbers of ads can be listened for across an unlimited number of broadcast stations.
- » Automated new-ad-discovery process dramatically reduces labor costs.
- » Reach Back feature ensures documentation of every advertisement's very first occurrence, even if the advert was not added to the library until days after its first airing.
- » Built-in database provides a platform for creating sophisticated, value-added reports and data products for advertisers, agencies, broadcasters, and regulators.
- » API makes integration with existing databases or information access portals quick and easy.
- » Platform as a service means zero capital investment for matching engine servers and software
- » Expert consulting services available. AdKontrol has media monitoring veterans on staff with process improvement, data integrity, quality assurance, and product development expertise.

System Flow Chart



Workflow Overview

Workflow consists of manual tasks requiring attention **daily, periodically, or once**.

Periodically/Once

These tasks include initial system setup and periodic maintenance:

- Channel Setup
- Advertising Rates Input
- Metadata Input Controls

Daily

Daily staff labor is required to update the ever-growing advertising-sample library. AdKontrol auto-detects advertising occurrences by comparing audio “fingerprints” of known ads with daily broadcast content. Keeping the fingerprint library up to date with the latest ads is a daily task for companies that monitor all advertising in the media markets serviced. For companies that monitor selectively, i.e., monitor only specific ads, library maintenance may be less frequent.

The process of discovering new ads is called “harvesting,” and the process of tagging and inserting new ads into the fingerprint library is called “promotion.”

Harvesting is aided by AdKontrol’s AutoMatcher, a tool that graphically displays a monitored station’s broadcast content and distinguishes between known and unknown content. Speed keys allow an experienced operator to quickly assess all unknown content to decide if it qualifies for adding to the fingerprint library.

Promotion is the essential step that adds metadata to a fingerprint record. This is a one-time step for each new ad. You may add as little or as much metadata to each ad record as your end products require. The more tag types you include, the more valuable and flexible your occurrence data will be.

Reporting / Data Presentation

AdKontrol allows advertising occurrence data to be viewed directly via a user interface, exported to spreadsheet format, or accessed by other databases or presentation portals.

If you’re new to the ad monitoring business, you can get to market quickly and inexpensively by building Excel templates of your products and populating them with exported data from AdKontrol. Many clients take this approach instead of or ahead of investing in custom databases and product delivery systems.

If you already have a system, our API makes it easy to directly query, push, or pull occurrence data.

Ingest

The foundation of AdKontrol is a capture and recording system based on our VideoPhill suite. It is easy to set up, can be used in networked installations (i.e., geographically distributed recorders), and allows most input types. (Learn more about VideoPhill’s capabilities at www.videophill.com)

VideoPhill supported media sources include, but are not limited to:

- Analog TV stations (PAL, NTSC, ...) via antenna or set top box
- DVB-T/DVB-C stations (MPEG and h.264, FTA only)
- DVB-S stations (FTA only)
- Internet radio streams (multiple protocols: shoutcast, icecast, rtmp, windows media, flash ...)
- Encrypted TV stations via external set top boxes

For geographically distributed recording locations, content can be moved via the public Internet or private WANs and LANs.

Recordings are kept for a minimum of one month, but may be archives for any length of time depending on hard drive space allotment.

Harvesting

To assist staff in quickly finding and clipping new ads, the system scans every channel for both known and unknown content. Both are highlighted, allowing an operator to jump quickly and efficiently to new content for review.

After determining that a segment of new, unknown content qualifies as a new ad, the operator can fine tune the start and end points and export the clip quickly, using hot keys rather than mouse moves, significantly reducing the time devoted to review and editing.

! An average worker can review, edit, and export all new ads from 24 hours of content in 20 minutes or less.

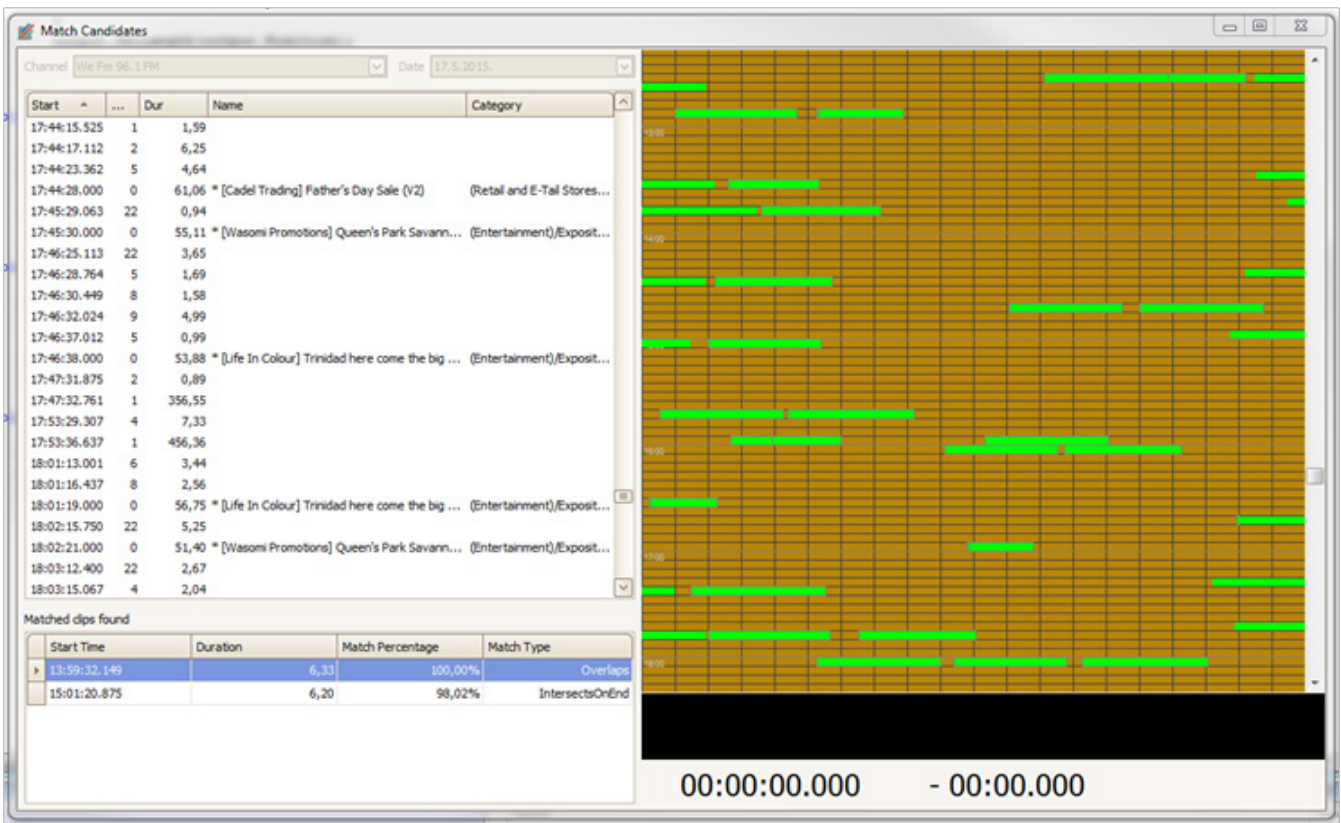


Figure 1. AutoMatcher GUI - Built for Speed

The system allows unlimited simultaneous instances of content review, allowing infinite scaling of labor as the number of monitored stations grows.

New ads found on one channel are automatically highlighted on all other channels.

Reviewing new, unknown content is a daily task. Content through midnight last night is available for harvesting this morning.

Promotion

All harvested clips (new ads) go through a final step before landing in the ad library. The promotion step moves, or promotes, a new ad to the ad library with associated metadata so that it to be found by the auto detection engine.

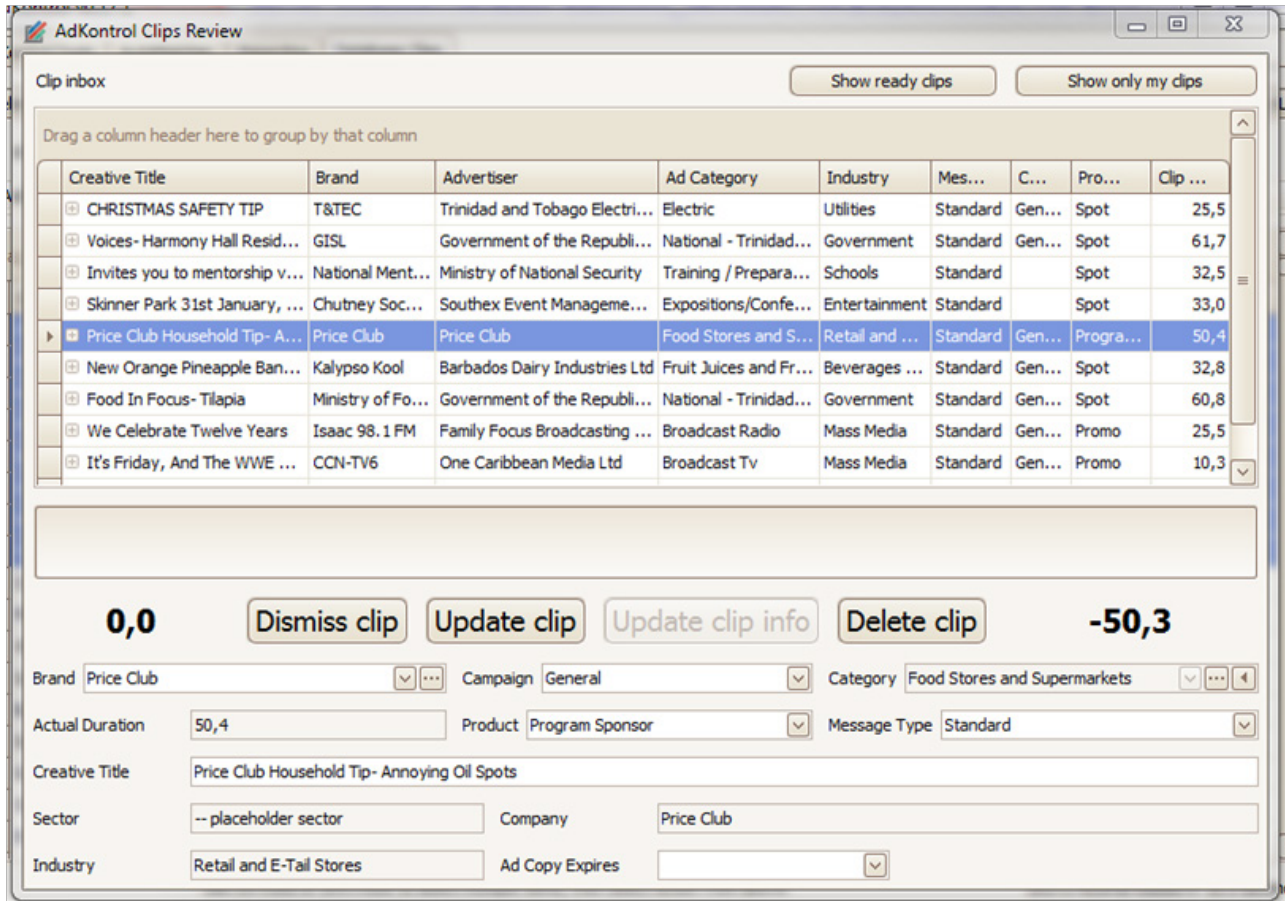


Figure 2. Promotion GUI is Customizable

Metadata adds value to occurrence data. The wider the variety of meta tags associated with an ad record, the more ways there are to aggregate, collate, and filter occurrence data for clients. The number of metadata tags associated to an ad record is customizable depending on your product requirements.

Most metadata inputs are automatic based on brand or advertiser master tables and system information. This increases data integrity by limiting the number of subjective decisions made by the promotion operator. Depending on how your tagging system is set up, the promoter may have to only identify brand and create a title for the ad.

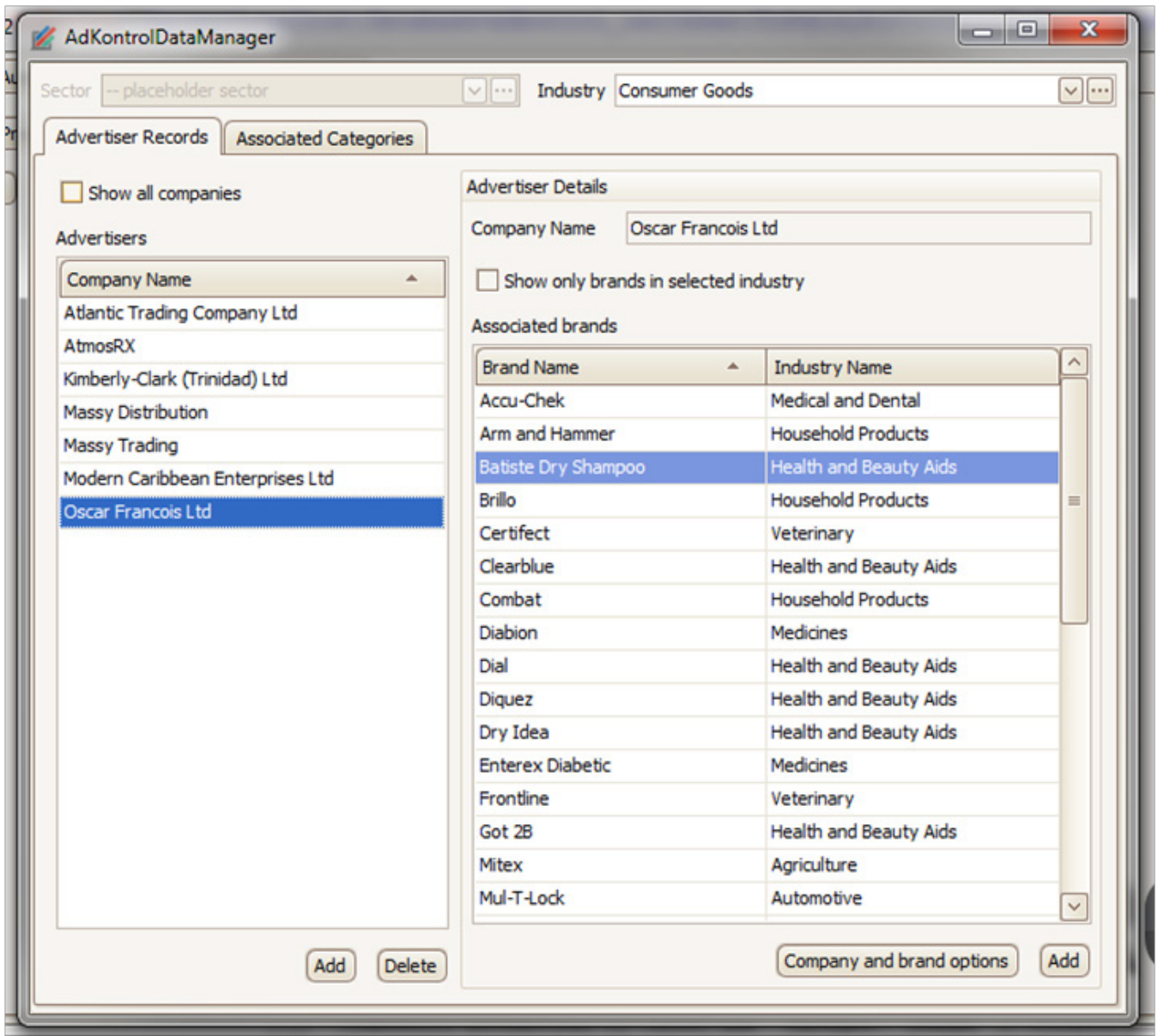


Figure 3. Metadata Maintenance GUI

Processing

AdKontrol's ad matching engine continuously scans all new broadcast content for occurrences of ads in the ad library. From the moment a new ad is promoted, it will be listened for in all future content. And when a new ad is first promoted, the Reach Back feature checks for occurrences that may have happened prior to the new ad's promotion. This ensures documentation of every advertisement's very first occurrence, even if the advert was not added to the library until days after its first airing.

Scanning is robust, agnostic to signal quality and other signal variations. This means there is no need to clip and promote various versions of the same ad from multiple TV or radio stations that have different sound environments.

Fingerprinting system accuracy

Scanning is done using our proprietary PlayKontrol audio fingerprinting system. With years of constant usage for both ads and music we can confidently define the system's accuracy as follows:

> **99.95% detection accuracy** - AdKontrol accurately logs all occurrences of properly clipped, correctly aired, known ads.

≈ **0% false positives at brand level** - There are no documented instances of AdKontrol confusing one brand for another.

≈ **0% of false positives at library level** - There are no documented instances of AdKontrol mistaking unknown content for known content.

Platform as a service

AdKontrol's processor-intensive matching algorithms are run offsite as a service, providing a number of advantages:

- » No hardware investment for the scanning engine platform. All processing is done off-site in our data processing center.
- » No practical limit on the number of channels that can be scanned or number of advertisements in the ad library. Adding more stations is just a matter of upgrading the license.
- » No cost for permanent, unlimited spot audio file archives maintained offsite - streaming links to all ads delivered as part of the occurrence data.
- » No cost for initial system customization - AdKontrol works with you to build out your initial system without additional development fees.

Reporting

ADKontrol provides a ready-made reporting interface for querying occurrence data.

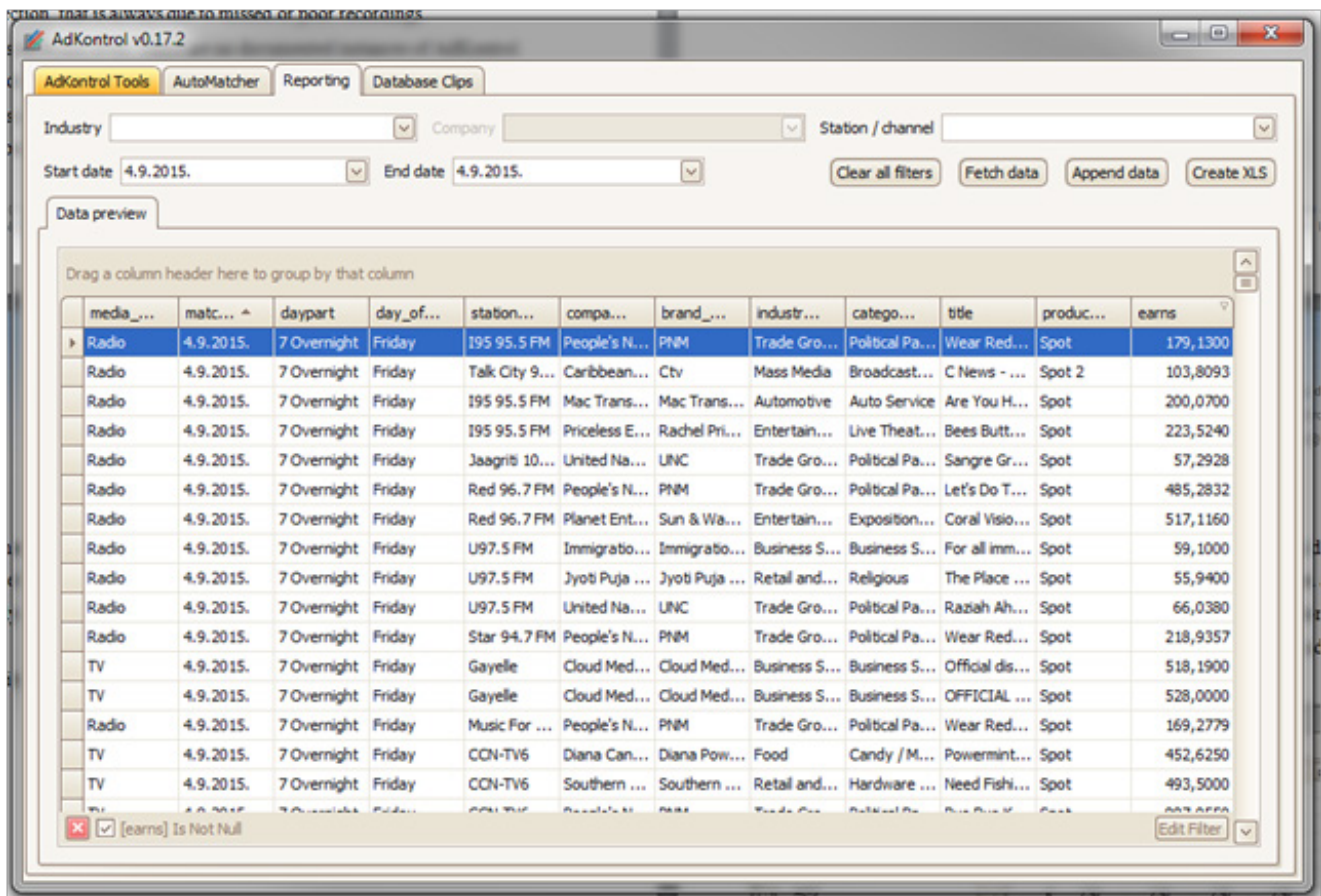


Figure 4. Report Interface

ADKontrol also supports easy export to Excel, allowing for further analysis with pivot tables, charts, and graphs.

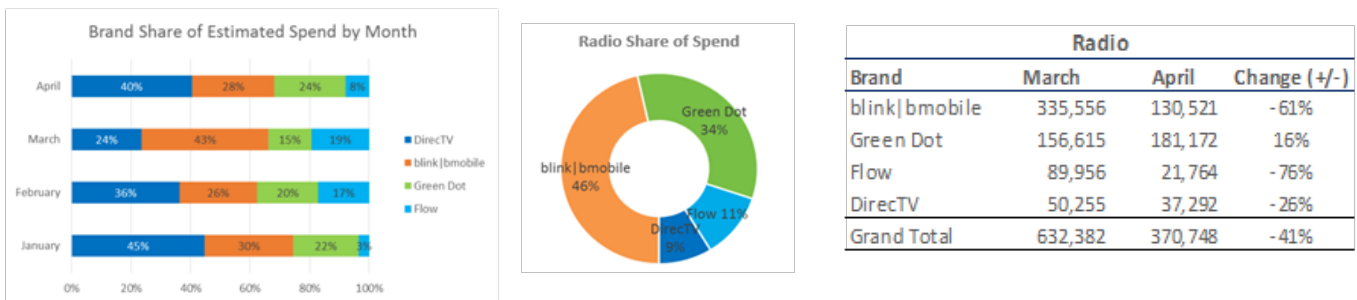


Figure 5. Examples of Data Analysis via Excel

An API is available to support direct query, push, or pull of data by your existing databases or presentation platforms.

ADKontrol also offers access to ready-made 3rd party portals (separate licensing required).

Price List Entry

ADKontrol keeps advertising rates for all channels in its internal database structures. Prices are defined as per second amounts with values calculated as ad duration x the station's per-second cost of an ad.

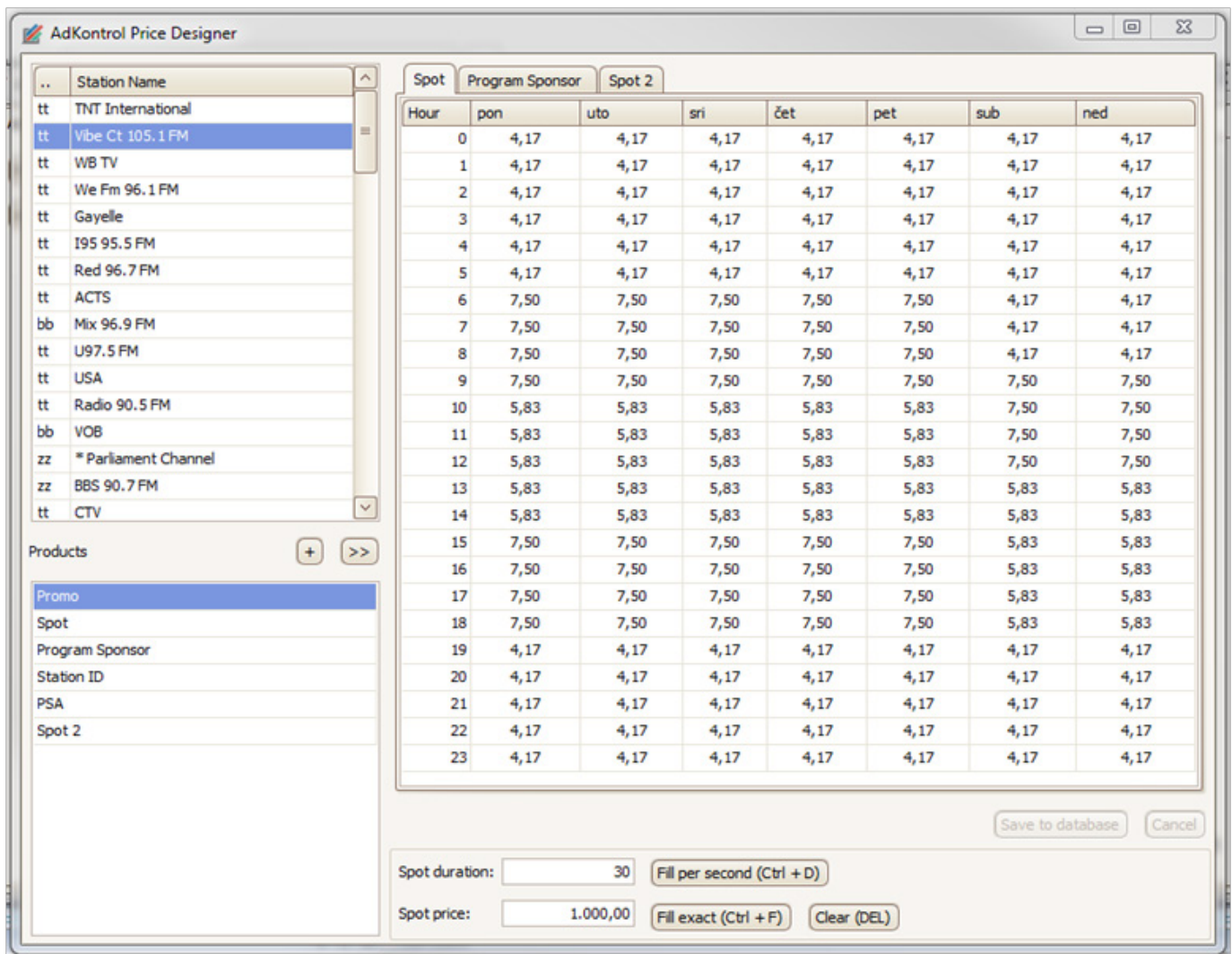


Figure 6. Advertising Rate GUI

Prices are entered in one hour slots for every day of the week. Multiple products can be defined for another layer of price control (e.g., spots, stations promotions, stingers, public announcements, etc.)

Clip Database

In case you need to update some tags on already promoted ads, or delete them, a simple tabular GUI is offered as shown below.

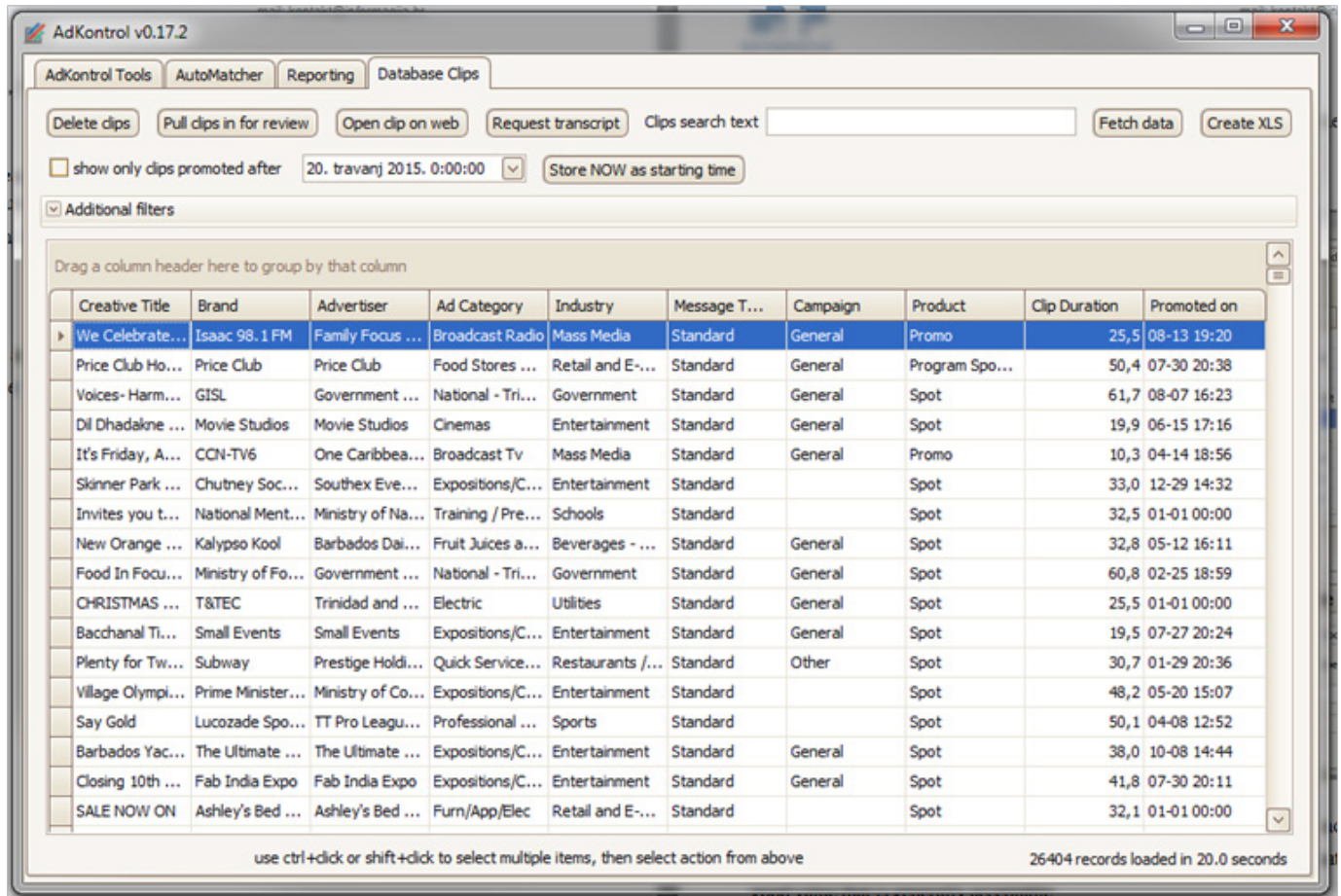


Figure 7. Ad Library Clip Database GUI

AD Kontrol

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