



# Content Matching Module



## Key Benefits

- Eliminates manual review & errors
- Ensures integrity of exclusive content
- Instant Video Proof of Advertising for e-mail distribution
- Matched Audio can be either be from Live Matches or from custom Backlog Searches
- Sample Audio Stamp file can be uploaded as MP3, WAV, WMV, ASF
- Automates monitoring of competitors
- Fully integrated with Observer Solution

## Common Use Cases

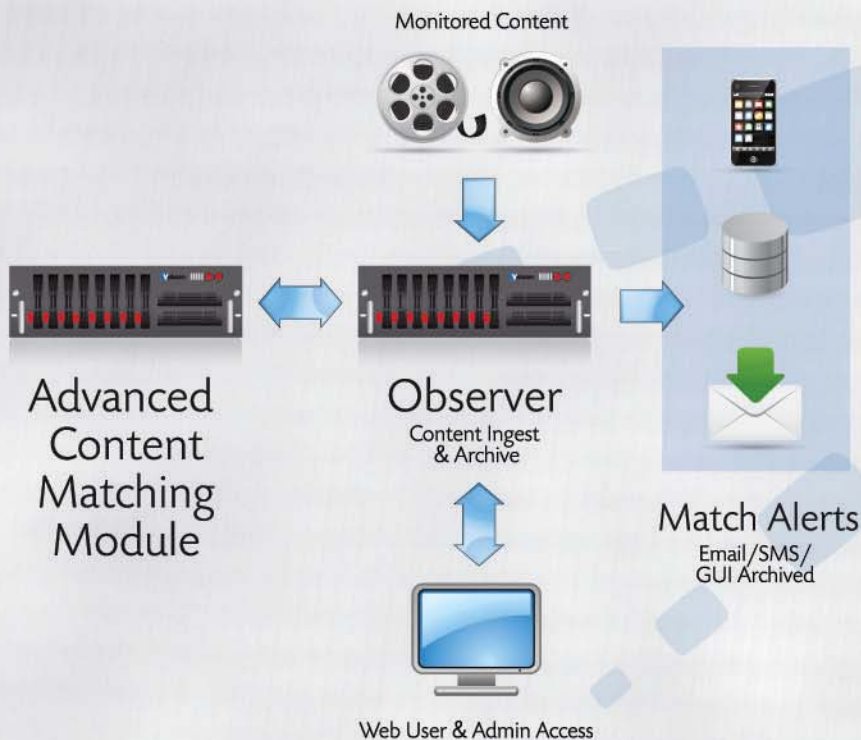
- Monitor competitive networks
- Monitor competitive brands
- Manage content infringement
- Monitor regulated advertising
- Monitor and be alerted of keywords
- Backlog search of ad keywords aired during set date & time criteria

## Audio Fingerprint Solutions for Content Matching

Advertising Agencies, Government Organizations, and Media Companies are continuously challenged with keeping tabs on their competitors, brands and exclusive content. The Content Matching Module (CMM) from Volicon is for organizations that need to measure or be notified automatically when certain A/V assets (i.e. keyword or slogan) are broadcast either live or from a previously recorded session for immediate advertising analytics. Fully integrated with the Observer content monitoring platform, the CMM can be set up and operate either as a standalone system or be integrated into other systems.

By providing a fully integrated, automated method to monitor for assets broadcast, the CMM empowers the operator with a new class of intuitive, web-based tracking tools for monitoring brands, competitors and licensing usage 24x7.





## Server Software

- Audio or Audio/Visual Content Identification
- Audio fingerprinting of audio & A/V assets
- Live and archived content detection
- SD or HD content – SDI, HD SDI or Analog
- Fingerprinting of imported or archived clips
- Matched Clip export
- SNMP, SMS & email alerting
- Summary Reporting
- Web interface for remote management

## Module System & HW Requirements

- Observer System for A/V ingest & archival
- Content Matching HW Server
- Observer Central Server optional

# Content Matching How it works

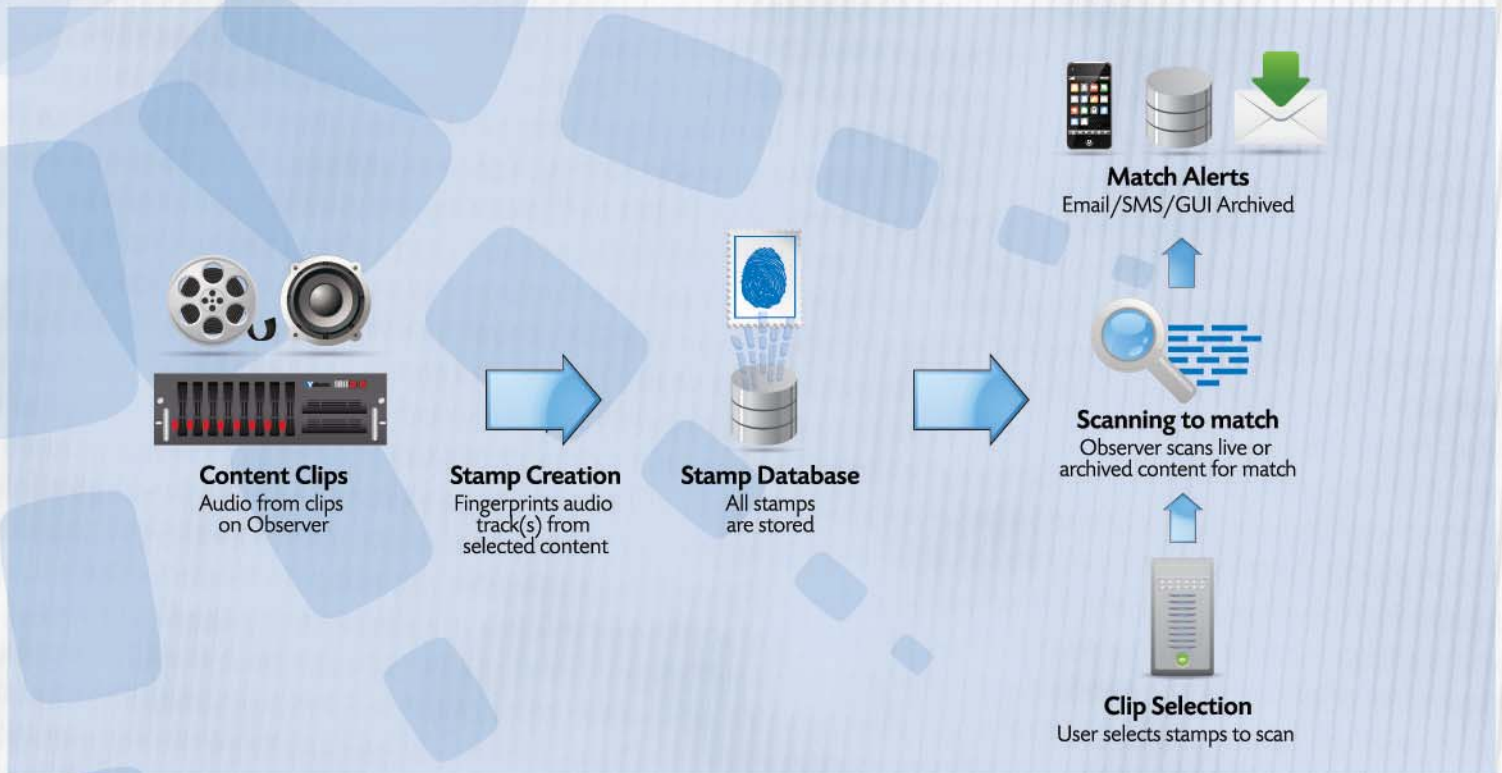
The Content Matching Module (CMM) uses advanced audio fingerprint stamp techniques to monitor both audio and audio visual content for matches in the Observer content database. To begin the matching process, the operator first imports content clips into the system to select from the Volicon Observer archive. The CMM then analyzes the audio track of the selected clips and creates a fingerprint stamp specific to each clip. The fingerprinting algorithm accommodates normal distortions or differences in volume and can identify whether some or all content has been broadcast.

The CMM stores all the stamps from the clips the user is interested in monitoring. After selecting which clips to scan for, the CMM will then automatically inspect all the monitored content for the select clips and can measure when the content appears as a broadcast asset. The user is then able to access a clip created on the Observer with a remotely viewable clip of the identified content to play back for verification. Alternatively, the user can also select to scan the archived content and measure when the clip was present historically.

All of the user management, web access, content ingest and alerting mechanisms with the CMM remain with the Observer system to allow for easy installation and operation.



# Content Matching System Block Diagram



## Content Matching Common Use Cases

**Monitor Competitive Networks or Stations** – Networks and Stations frequently want to know which advertisements are being run by their competitors. The CMM allows the operators to create fingerprint stamps for key commercials and automatically measure and mark when they are present. This competitive intelligence enables the operator to exactly know the ad time is spent by the advertiser and can serve as critical information when targeting or negotiating with advertisers on time.

**Monitor Competitive Brands** – Companies want to know the ad spending patterns of competitive brands. Similar to the use case example above, the CMM solution enables the operator to automatically scan for select commercials. This allows the operator to automatically know the ad spending patterns (times, content & channels) of their competition. This valuable information can be used to direct their own advertising campaigns.

**Manage Content Infringement** – If a station or network pays for exclusive access to content, they would like to measure and enforce that exclusivity. The operator would enable the CMM to scan for the premium content on competitive channels and alert if it is present.

**Monitor Regulated Advertising** - Governmental agencies can use the CMM to measure regulated advertising such as political or public service ads. This allows the agencies to measure advertising time and view the identified content

