

# Advanced Content Matching

## *Observer Family of Media Monitoring Solutions*

Companies and operators are challenged with keeping tabs on their competitors, brands and exclusive content. The Advanced Content Matching Module (ACMM) from Volicon is for organizations that need measure or be notified when certain A/V assets are broadcast. Fully integrated with the Observer content monitoring platform, the ACMM is easy to setup and can operate stand alone or be integrated into other systems. It is perfect for organizations that need to track proprietary or exclusive assets and know when those assets were broadcast.

By providing an automated method to monitor for asset broadcast, the ACMM enables the operator with a new class of tool for monitoring competitors and licensing.

### **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 and archival
- Content Matching HW Server
- Observer Central Server optional

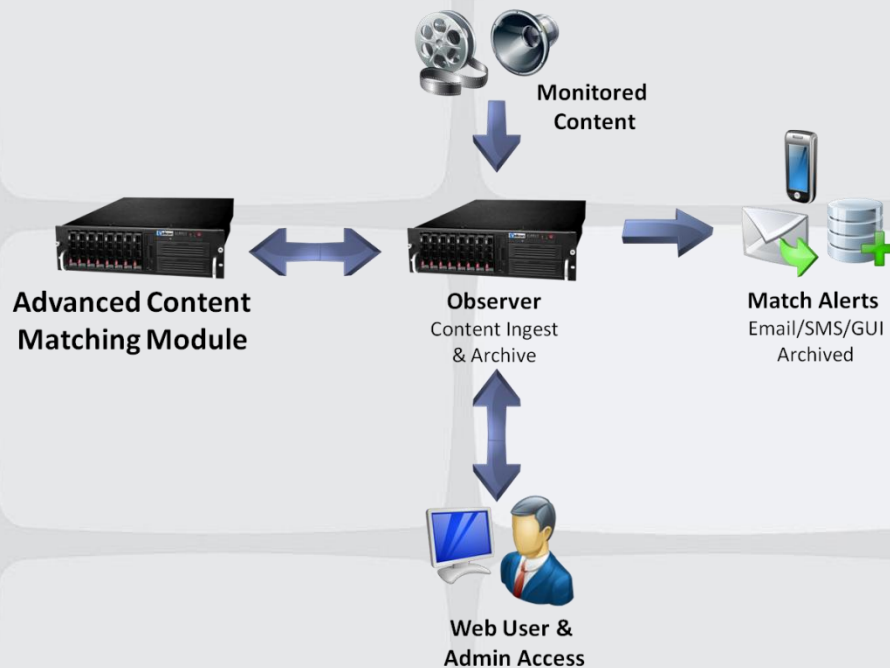
### **Common Use Cases**

- Monitor competitive networks
- Monitor competitive brands
- Manage content infringement
- Monitor regulated advertising

### **Key Benefits**

- Eliminates manual review & errors
- Ensures integrity of exclusive content
- Automates monitoring of competitors
- Fully integrated with Observer Solution

## System Block Diagram



### Common Use Case Detail

- Monitor Competitive Networks or Stations – Networks and Stations frequently want to know which advertisements are being run by their competitors. The ACMM 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 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. Like the above, the ACMM 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 ACMM to scan for the premium content on competitive channels and alert if it is present.
- Monitor Regulated Advertising – Governmental agencies can use the ACMM to measure regulated advertising such as political or public service ads. This allows the agencies to measure advertising time and view the identified content.

# Advanced Content Matching Module

## Example Screen Shots

### Stamp & Clip Section Setup Parameters

**FILE UPLOAD**

Click this button to add new files to the recognition database, the supported file formats are WMV, ASF, WAV, MP3 and WMA.  
After the file was successfully uploaded "Reckon Client" would be able to identify it automatically.

Before uploading a file for identification verify a data source is set so the designated recognition server could be identified.

Strict

Upload progress (0/0)

---

**STAMP REMOVAL**

Used to remove an existing stamp from the database, removal is done according to 'stamp' file name or according to the stamp id.

Delete stamp source if available  
(the original media file used to create the stamp)

---

**LOGGER**

Logs the last recognised segment as a WAV file in the path specified below

**Log path**

**1. DATA SOURCE**

Here, the IP & port of the recognition server should be specified.

Data source (ip/port)

/

---

**2. CAPTURE DEVICE**

Use this drop down to select the capture device used for recognition.

There are two main types of capture devices:  
**Physical** devices such as the microphone, line in, or any audio capture device.  
**Virtual** device which is a network URL generating an audio stream or a file (hence, mms://... or c:\audio.mp3)

---

**3. RECOGNITION**

To start the recognition process a data source and capture device must be specified, clicking the 'Start Monitoring' button will commence the recognition process, recognition results will show on the 'Active melody' pane below.

The loudness meter to the right show the audio level, recognition performs best with average loudness

Active melody

### Stamp View Available Fingerprints

Stamp Name	Sigcount	Create Time	Duration	Delete
1435 - areas naturales protegidas montañas_1.wav.stamp	31	2009-02-04 07:30:57	00:00:28	<input checked="" type="checkbox"/>
1503 - segoborhocf registros de concion ver 10.wav.stamp	21	2009-02-04 07:30:58	00:00:17	<input checked="" type="checkbox"/>
1600 - file la transparencia es de todos_1.mp3.stamp	34	2009-02-04 07:31:01	00:00:30	<input checked="" type="checkbox"/>
1800 - nombre y apellido del consumidor en 50.mp3.stamp	864	2009-02-04 07:31:17	00:14:40	<input checked="" type="checkbox"/>

### Content Match View Searchable Record of Matches

ID	Trk	Created by	Name	Description	Created	Modified	Delete	Edit	Mail
33400	1	admin	Content Match Alert...	Content Match Alert (9INO_FISH - ), Clip ; ...	2008-10-16	2008-10-16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33399	1	admin	Content Match Alert...	Content Match Alert (AF ORDABLE DENTU...	2008-10-16	2008-10-16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33398	1	admin	Content Match Alert...	Content Match Alert (FP_PAVILION - ), Clip...	2008-10-16	2008-10-16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33397	1	admin	Content Match Alert...	Content Match Alert (TOYOTA - ), Clip ; CM...	2008-10-16	2008-10-16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

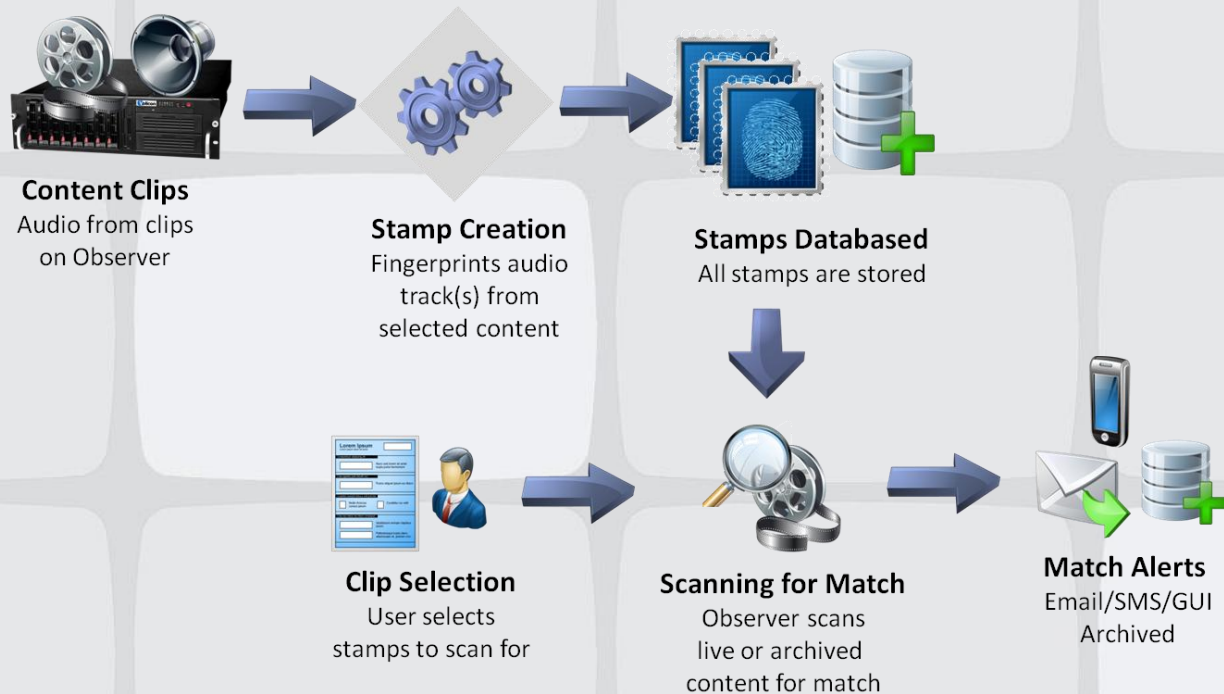
# CONTENT MATCHING

## How it Works

The ACMM uses advanced audio fingerprint stamp techniques to monitor both audio and audio visual content for matches. The operator imports content clips into the system to select them from the Observer archive. The ACMM then analyzes the audio track of the clip and creates a fingerprint stamp specific to this clip. The fingerprinting algorithm accommodates normal distortions or differences in volume and can identify whether some or all content has been broadcast.

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

The user management, web access, content ingest and alerting mechanisms with the ACMM all remain with the Observer to allow for easy installation and operation.



Volicon, Inc. 111 South Bedford St. Burlington, MA 01803  
Tel: +1 781 221 7400 Fax: +1 781 221 7407  
Web: [www.volicon.com](http://www.volicon.com) Email: [info@volicon.com](mailto:info@volicon.com)  
Specifications subject to change without notice