



# Supplement to Encoding Installation and Configuration Policy—Internet Distribution Policy

Revision A

2012-02-24

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Nielsen Encoder Support

800-537-4872 option 2

[Encoders@Nielsen.com](mailto:Encoders@Nielsen.com)

Revision Table

Revision	Date	Changes
A	2012-02-24	Initial addendum to the Encoding Installation and Configuration Policy.

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## 1.0 Introduction

This policy covers the media measurement and TV ratings model of distribution via the Internet.

This document specifies the rules regarding which US television sources must encode audio watermarks and/or be monitored to support television and Internet audience measurement and electronic program verification. These rules are not optional. Strict adherence ensures measurement and verification accuracy.

This document establishes the policy by which encoder equipment is to be installed and configured to ensure proper operation and performance for Nielsen to accurately detect and report household viewing of Internet content. Per their service agreements with The Nielsen Company, media distributors are required to actively encode audio watermarks using the NAVE -Nielsen Audio Video Encoder. Failure to comply with this policy can result in inaccurate ratings data.

This document describes the guidelines for providers and distributors of assets to ensure they receive Extended Screen credit from the Nielsen Company for assets hosted on the Internet.

### 1.1 Purpose

This document specifies the rules regarding which US television sources must encode audio watermarks and/or be monitored to support television and Internet audience measurement and electronic program verification. These rules are not optional. Strict adherence ensures measurement and verification accuracy.

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This document describes the guidelines for providers and distributors of assets to ensure they receive Extended Screen credit from the Nielsen Company for assets hosted on the Internet.

## 1.2 Related Documents

- Client agreement
- *Encoding Installation and Configuration Policy*
- Supplements to the *Encoding Installation and Configuration Policy*
  - *Encoder Selection and Comparison Charts*
  - *NAVE II*
- *NAVE II User Manual*

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## 2.0 Media Measurement and TV Ratings Model

Media companies are now providing their assets (television shows, movies, etc) by way of their public Internet sites, partner sites, and private sites, such as sites using the TV Everywhere authentication system.

To provide Internet viewing data that is comparable to our current television viewing as part of Extended Screen measurement, client partners must use the same audio watermarking technology that all the major cable and broadcast television networks use.

To qualify for Extended Screen measurement, an asset must be captured with the original audio watermarks applied "as fed," meaning the same, original, program and commercial content as aired and fed through the Nielsen NAVE.

## 2.1 Workflow Diagrams

### 2.1.1 Broadcast Network

Broadcast network media providers use a NAVE to apply audio watermarks. Figure 1 shows two Nielsen watermark encoders. It also shows that audio watermarks are encoded in the assets prior to distribution of the files to network affiliates.

For a program consumed through the Web to qualify for TV ratings credit, a broadcast network provider must capture the program asset after it has been watermarked by a NAVE in the normal distribution flow. The program asset file must have **the same audio watermarks** as the content distributed on the national distribution feed.

**Important** Content is watermarked only once.

Broadcasters can audio watermark encode content ahead of the actual distribution time as depicted by the Nielsen encoder connected to the content management system. However, in such cases, the pre-encoded content is **not encoded a second time** when the content is distributed

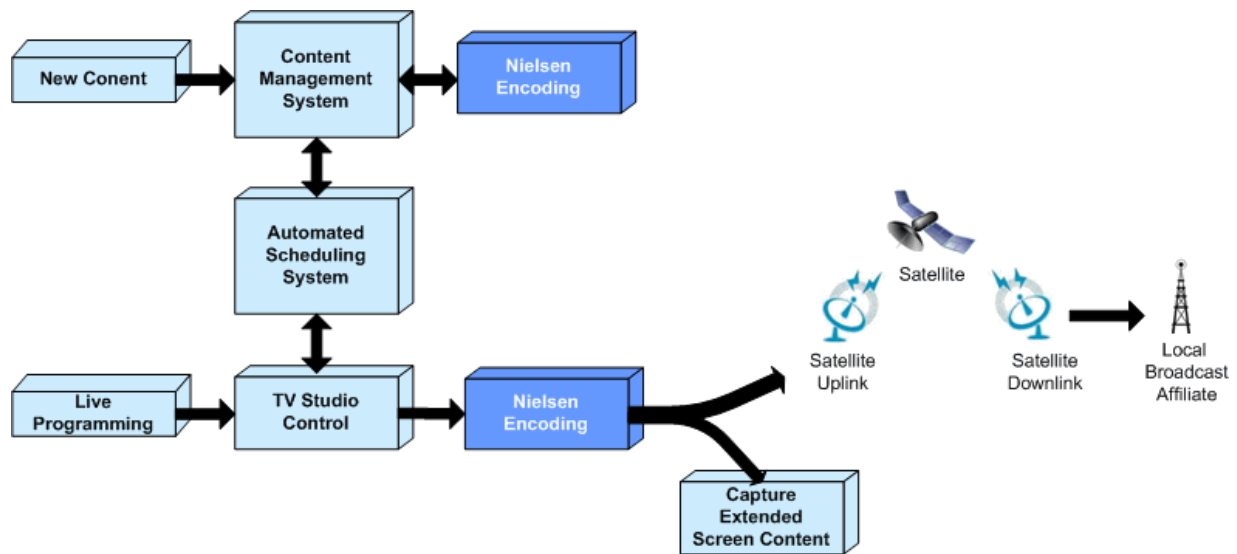


Figure 1 Broadcast Network Workflow

## 2.2 Cable Network Media Provider

Cable network providers encode audio watermarks immediately before transmission of the signal to the distribution partners. Figure 2 shows that audio watermarks are encoded in real-time as assets are distributed.

To qualify for TV ratings credit, a cable network provider must capture the asset after it has been watermarked by a NAVE in the normal distribution flow. To receive credit for Extended Screen measurement, the asset files must have **the same** audio watermarks as

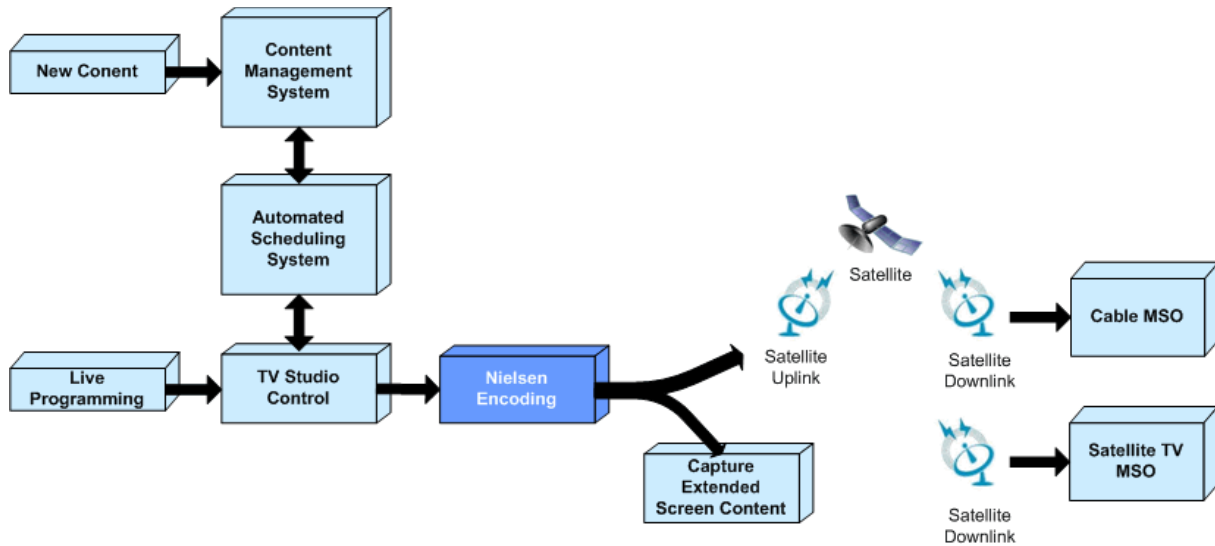


Figure 2 Cable Network Media Provider Workflow



## 2.2.1 Watermarking Responsibility

Internet distributors who want assets included in television measurement must ensure the assets are watermarked by the media provider. The provider watermarks the asset when the content is broadcast or distributed. The watermark enables identification of when the program aired and it is essential for crediting Extended Screen viewing.

The asset from the broadcast or cable network media provider should not have watermarks from any other source.

**Table 1 Watermark Application**

Media Provider	Watermark Applied By	Watermark Type	Applied To
Broadcast network	Provider of media	Program Content (PC)	Programs and commercials
Cable network	Provider of media	Final Distributor (FD)	Programs and commercials

## 2.2.2 Audio Characteristics of Assets

### Files Supplied by Content Providers

The source files received from asset providers must conform to the following audio guidelines:

**Table 2 Audio for Files Supplied by Providers**

Quality	Resolution	Sampling Rate
Preferred	16 bit	48 KHz
Acceptable	24 bit	48 KHz
Acceptable	16 bit	44.1 KHz

### Files Created for Internet Distribution

Audio settings for files that are being encoded are critically important for preserving watermarks and must have the following characteristics:

**Table 3 Audio for Files Created for Internet Distribution**

Attribute	Minimum	Preferred
Sampling rate	44.1 KHz	48 KHz
Resolution	16 bits	16 bits
Bit rate	128 Kbps	192 Kbps

# Glossary

## B

### Broadcast Network

A broadcast network is a program distributor contractually engaging with stations or cable outlets to carry the network programming to secure national carriage of programming. A narrower FCC definition states that a network distributes at least 15 hours of original programming per week to affiliates.

### Broadcast Network Affiliate

A broadcast network affiliate is a broadcast station or local cable channel (including network-owned and network-operated stations) that airs network programs and national commercials.

## C

### Content Encode

Broadcast networks, syndicators, and VOD asset providers use encoding to mark assets, which enables measurement. National broadcast programs, for example, are encoded. This encoding is picked up both in homes and at monitoring sites to enable us to tell when the program aired and who viewed it.

## E

### Encoder

A physical device or set of software that inserts an identifying code into the audio (watermark) of distributor events to identify those events as a specific program, commercial, or other item. Hardware encoders are manufactured by outside vendors. Nielsen also provides encoding software to vendors and content providers that places the watermark on the content for future retrieval and use by Nielsen. Nielsen frequently uses the term "watermark" as a synonym for "encode."

## F

### Final Distributor (FD)

A television broadcaster or network that aggregates and distributes television assets to TV viewers.

### Final Distributor Code

Identifies the last distribution outlet for the asset. Examples of such outlets include cable networks such as ESPN and CNN and local broadcast stations such as WFLA and WABC. Cable and satellite MSOs are not final distributors because they simply receive assets from a final distributor and distribute it to viewers.

## Final Distributor Encode

The process by which a final distributor inserts its SID into the television signal.

## H

### Hybrid Networks

Networks that have both over-the-air broadcast station distribution and direct cable/DBS distribution.

## L

### Local Cable Origination

Local cable origination refers to sources typically used by cable services for originating signals that are not satellite-fed. The signals may be local weather, local sports, or other programming and may be aired on a single head end or a service of regional interest. These sources are initiated by a multiple service operator (MSO) and aired on multiple head ends. They are also the sources that represent the cable channels that carry network programming, but may insert some of their own programming.

## M

### Media Monitoring System—MMS

A Nielsen system that collects reference data from analog and DTV signals. It includes an acquisition unit (AU), collection unit (CU), and a Collection Facility (CF).

### Monitored

Television stations, networks, and satellite feeds can be monitored and fed to A/P by the Media Monitoring System (MMS). Monitoring can provide audio signatures and codes to the A/P system so data collected from a metered home can be matched against sources that the home may have viewed. In addition, monitoring enables A/P to correct the time offset when final encoder clocks are not accurately synchronized.

## N

### Nielsen Media Identifier—NMI

Fingerprint and watermark technologies to enable clients to mark their unique, file-based content. Nielsen uses these marks to identify the content, measure consumption of the media, and create reports on audiences and their viewing habits.

## P

### Parent / Satellite Relationship

A parent station provides source programming for rebroadcast on a nearby station, which is called the “satellite.” For a station to receive FCC-sanctioned satellite status, it must meet the following criteria:

- No City Grade overlap exists between the parent and the satellite.
- The proposed satellite would provide service to an underserved area.
- No alternative operator is ready and able to construct or to purchase and operate the satellite as a full-service station.

### Program Content Code (PC)

Code that identifies the distribution sources for the program content prior to final distribution. Video content can pass through many distribution sources prior to final distribution, such as a national broadcast network distributing assets to all of its affiliates. Broadcast networks, syndicators, and television studios may each add program content codes to show their places in the distribution chain.

## S

### Satellite Feeds

The uplink facility of a distributor where the signals are transmitted from earth to a satellite to be available for distribution by cable systems or broadcast stations depending on the source. The feed may be part of, and are not limited to, a national cable network, a regional cable network, or a broadcast network.

### Service Carried

Service carried refers to the distribution source of a service being re-broadcast over the air through a broadcast digital signal of a broadcast digital transmitter; for example, ESPN on WFLA-DT3. It is assigned to digital channels when 100% of their signal (programming and commercials) is simulcast from another source. For a broadcast digital signal, this source is something other than its analog feed—these are identified as “analog/digital simulcast.” Service carried is also assigned to cable outlets that carry 100% of a network-supplied signal.

## SID

Source identifier. A unique number assigned to each encoder device that is encoded into the audio portion of the signal. The SID identifies a particular encoder and is the link between the source of the encoding on an encoded video (distributor or third-party encoder) and an encoder. SID is part of the watermark code that is encoded on the video and is used in combination with the encoded date/time range to identify a particular event. In summary, the SID identifies the:

- Source of the content
- Points in the distribution chain
- Final distributor

## Station Tower

The transmitter associated with a full-power or low-power over-the-air broadcast station. A station tower can choose to affiliate with a broadcast network, be independent, or be a public broadcasting station.

A station tower may carry a variety of programming considered either national or local. National programming may include network, syndicated, or both types of programming. Local programming originates at the station level.

Nielsen rules define the minimum number of hours that must be carried to qualify for network "affiliate" status, however, a station does not have to be categorized as a network affiliate to carry network programs.

A low-power station can use its station tower to act as a translator to boost the signal of another station, viewing and/or tuning to the low-power station loses unique identity and takes on the identity of the station(s) being "boosted."

## Superstation

A broadcast station with a signal available to cable systems across the country by satellite transmission. It is available in its home market and across the country.

## T

### Television Satellite

A television satellite is a full-power terrestrial broadcast station authorized under Part 73 of the FCC Rules to retransmit all or part of the programming of another station (most commonly the parent station). Satellite stations are operated by the same party that operates the parent station. (Source:[http://www.fcc.gov/Bureaus/Mass\\_Media/Orders/1999/fcc99208.pdf](http://www.fcc.gov/Bureaus/Mass_Media/Orders/1999/fcc99208.pdf))

### Translator

An over-the-air broadcast facility that is incapable of originating a signal. A translator passes along signals received from another broadcast station to extend the viewing area of that broadcast station. Any viewing or tuning to the translator station loses unique identity and takes on the identity of the station(s) being "boosted."

## V

### Viewer-ready

Univision East and West feeds are examples of "viewer ready" broadcast feeds that go out on satellite channels. These feeds already have commercials inserted at the network level and the content is "ready for viewers." The network content on these feeds is the same as the content a local affiliate uses but, at certain times, the local affiliate inserts its own content and commercials.

