

Accurately synchronizing companion devices with TV programs



SyncNow

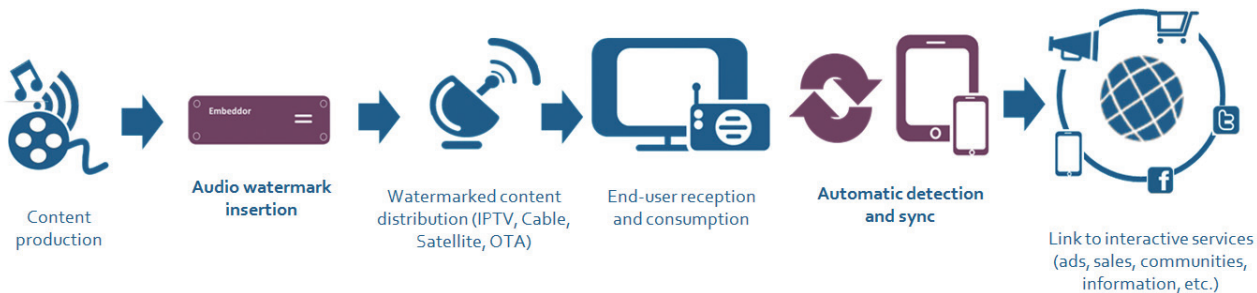
How to accurately synchronize tablets and smartphones with the TV screen, open new user experiences and new revenue streams?

2nd Screen or Companion Screen is the new platform allowing broadcasters, media companies and advertisers to engage the end-users to interact with scheduled programs such as reality/talk shows, movies, live sports, commercials... 2nd Screen applications enrich the TV experience and improve the viewer engagement by introducing social and personal dimensions into TV programs. The Civolution audio watermarking technology provides essential features that dramatically increase the value of 2nd Screen applications:

- Automatic content identification
- Accurate synchronization with TV content regardless of transit delay, time-shifting or PVR recording

Embedded within smart device applications the Civolution technology opens up attractive new revenue opportunities :

- Interactivity (gambling, tele-voting, polls)
- Social network (rating, chatting, sharing)
- Cross sales (VoD, Catch-Up, bonus)
- Live content enrichment, exclusives, bonus
- Engagement measurement
- Viral capabilities
- Targeted advertising
- Premium contents



FEATURES	BENEFITS
Automatic and reliable detection (within a few seconds) of content being watched on TV.	Bring optimal consumer convenience (push vs. pull). The application automatically 'follows' the viewing behavior of the individual consumer.
Live interactivity: time-synchronization of companion device with the content played on the TV sets.	Trigger real-time events related to the content being watched. Agnostic to the delivery network (Satellite, Cable, IPTV, Analog), or TV watching mode (live, time-shifting, PVR recording).
High scalability: independent from the transmission path and related transit delay (e.g. cable redistribution or programming by network affiliates).	Once content is watermarked, all detections reside locally in the smart device, allowing highly scalable application deployments for 2nd screens.
Imperceptibility and robustness of the audio watermark regardless of content type (debate, audition shows, sport events, news, music, children programs, etc.).	Allows design and development of any applications/services related to content (polls, survey, coupons, bonus, personal information, detailed statistics, lyrics/karaoke, games, etc.).
Powerful and easy to implement detection API.	Fast-to-market and trivial integration development of 2nd Screen applications based on Civolution's SyncNow - 2nd Screen.

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SYCNOW

Live embedding solution

- Real-time audio watermark embedding system for watermarking live content
- Professional grade equipment designed for integration in the broadcast chain and live feeds processing
- Time-synchronization for accurate time stamp
- Suitable for real-time embedding requirements

File embedding solution

- Post production solution audio watermark embedding into audio files
- Supported input formats:
 - MXF, GXF
 - Raw PCM or MPEG files

Transcoder embedding solution

- Plug-in solution for embedding watermark information during file transcoding process (for a list of supported transcoders, contact Civolution)

Detection/synchronization SDK solution

- Detection libs and API for apps development
- Integration and test procedures for easy set up of Civolution's SyncNow - 2nd Screen

Monitoring solution

- Quality Control solution to monitor the audio watermark embedding process on live signals
- Seamless integration within any existing monitoring system



Detection software

> Audio Watermarking SDK

- API and libs for iOS, Android and MS Windows
- Input: raw PCM
- Output: detected payload (ID + timestamp)
- Full control of execution through the API

Head End solution

> Audio Watermarking Embedder

- Software :
 - For audio/video files
 - Plug-in for 3rd party transcoders
- Hardware: AES-EBU, SD-SDI and HD-SDI

> Audio Watermarking Quality Control Reader

- Hardware: AES-EBU, SD-SDI and HD-SDI

Services

> Integration support

- Available worldwide

> Support and Maintenance

- Hotline 24x7 for head end solution

Specification and performance

- Time to sync: about 5 seconds, customizable
- Accuracy: under 1 second
- Customizable watermark payload
- Stop/Start watermark detection interface

> What is a Audio Watermarking ?

Digital audio watermarking consists of embedding imperceptible information into the audio content (file, sound track) without affecting the audio quality of the original file (inaudible). This data - or payload - gives the media assets a persistent identity. It can later be extracted and interpreted by devices to identify, protect, synchronize or monetize the asset. The audio watermark information survives signal compression and transitions in the broadcast chain. It will travel through the air from the TV speakers so that the 2nd Screen device can detect it via the microphone input.

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