Stay in control with customizable monitoring and interfaces.

iControl Audio/Video Fingerprint Analysis from Grass Valley, a Belden Brand, allow detection and measurement of lip sync errors as well as alarming on unexpected signal delays and audio/video content mismatches.

Whether the signals are local or distributed over remote locations, iControl collects fingerprint data generated by miscellaneous Grass Valley probes and processors and forwarded over IP networks to detect the presence of lip sync errors and accurately measure actual delays. Should errors occur in the routing and distribution of signals, fingerprints can also contribute to the detection of the unexpected audio or video content.

Audio/Video Fingerprints can be used to complement multichannel playout monitoring, remote signal monitoring and most system configurations supported by iControl.

**Kaleido Integration**

Detected lip sync errors and measurements can be forwarded to Kaleido-X and Kaleido-X16 multiviewers, for on-screen reporting. This allows operators to be made aware of errors, even if they are not actively listening to audio and watching video.

**End-to-End Lip Sync Error Monitoring**

With its rich graphics and powerful user interface, iControl Web provides the ideal environment for multisite, multichannel lip sync monitoring. Because audio-to-video monitoring can be depicted in the actual distribution topology of the broadcast chain, it becomes much easier for an operator to understand the consequence of lip sync errors, and to take corrective actions.

**Lip Sync Detection Across Entire Network**

The temporal relationship between video and audio can be compromised every time the signal is encoded and decoded, or when video/audio processing is performed. In broad television signal distribution networks, such as the one depicted below, the possibility of lip sync errors is substantial, especially when signals are transmitted across several locations. iControl Lip Sync Monitoring can collect data from a host of Densitè modules to perform, over IP, end-to-end detection and measurement of lip sync errors.
iControl Audio-Video Fingerprints  Lip Sync Error Detection, Audio/Video Delay Measurement and Content Mismatch Alarm

**KEY FEATURES**

- Powerful lip synchronization detection and alarming
- Real-time computation of fingerprints from multiple signals
- Powerful lip sync delay analysis
- Detection of up to ± 4s of delay
- Delay measurement with a ± 2 ms accuracy
- Versatile content comparison and mismatch alarming
- Video content mismatch based on motion
- Audio content mismatch based on audio levels
- Allows users to define the area of the video frame that will contribute to video fingerprints, providing maximum flexibility in defining content comparison settings
- Mismatch is detected in a matter of seconds, allowing operators to quickly respond to unexpected conditions

**Accurate Measurement and Extensive Alarm Management**

- User-selectable alarm thresholds
- Provides accurate lip sync error measurement in milliseconds
- Alarms and measurements can be forwarded to Kaleido multiviewers
- All alarms can be captured by the powerful iControl log viewer
- Detected alarms can also be configured with the iControl alarm management, for email notification, SNMP alarming and other automatic action triggers

**Multisignal, Multisite and Multiformat Monitoring**

- Collects fingerprints from multiple Densité modules, including:
  - ADX-3981: 3G/HD/SD 8 AES audio and metadata de-embedder
  - AMX-3981: 3G/HD/SD 8 AES audio and metadata embedder
  - EAP-3901: 3G/HD/SD embedded audio processor
  - EAP-3101: SD embedded audio processor
  - HCO-1822: 2x1 HD/SD/ASI change-over
  - HLP-1801: HD/SD lip sync probe
  - XVP-3901: 3G/HD/SD up/down/crossconverter with audio processor
- Supports lip sync monitoring across multiple key signal formats
- Multisite support: fingerprints can be collected from multiple locations, and can be compared centrally or across multiple sites
- Signal groups can be defined for more effective monitoring across complex networks

**ORDERING**

- **IC-FINGERPRINT**  iControl Fingerprint license for lip sync detection for a single playout channel or station*
- **IC-BASE-EDITION-V3**  iControl Base Edition including: 1 RU Dell PowerEdge R330 application server, iControl navigator application, GSM alarm management service and Densité card management service
- **IC-BASE-EDITOR-ENT-V3**  iControl Base Edition including: 1 RU Enterprise-Grade Dell PowerEdge R330 application server with redundant power supplies and disk drive with RAID controller, iControl navigator application, GSM alarm management service and Densité card management service

*Requires Grass Valley products with fingerprint generator.
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