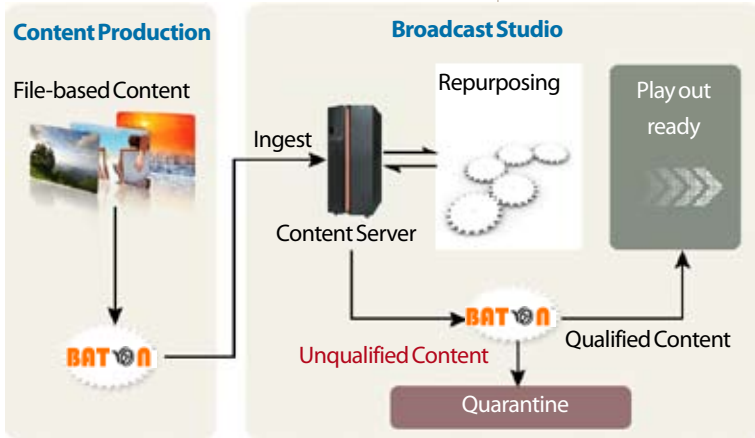




# BATON™

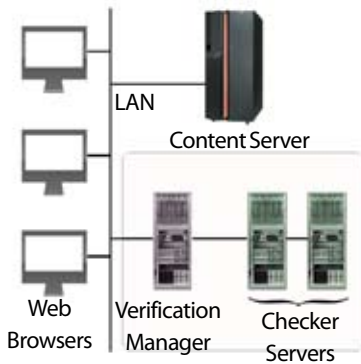
## Automated Content Verification System



### Key features

- First software solution for verification and quality control of digital media content
- Provides concrete quality metrics and QC audit trail
- Ensures content for quality broadcast
- Designed for LAN and multi-core CPU for enhanced performance
- Seamless integration with existing workflow
- Scalable architecture suitable for small, medium, and large facilities
- Leverages existing IT infrastructure
- Heterogeneous platform support

### Baton Ensuring Content Readiness in Content Delivery and Broadcast



### Baton Environment

Integrated with Popular Media Servers, such as Omneon MediaGrid Storage System

### Content Readiness - From Creation to Distribution

File-based workflow is a reality in the media production and broadcast industry. Ingest, acquisition, repurposing, and distribution are getting re-aligned to the tapeless workflows. There is an explosion in digital content and heightened complexity with multiple formats demanded by new channels and new markets. In today's highly competitive environment, manual QC cannot ensure if your content is ready for delivery!

To ensure content readiness, adopt Interra's Baton – an automated content verification system for file-based SD, HD, and mixed workflows. Baton enables you to automate quality control of content, certify content for broadcast, streamline workflows, and minimize manual and subjective QC.

Available as software solution, Baton can be easily plugged into your facility's existing workflow. Baton's web-based architecture enables remote management of verification tasks, and its intuitive interface is easy-to-use for operations.

### Created by Experts

- Developed by audio/video experts who created Vega Analyzers, the leader in offline audio/video analysis
- Vega has been adopted worldwide as the de facto standards compliance tool, by Microsoft, Intel, Apple, Cisco, Broadcom, Sony, BBC, and many more leading companies

### Baton Users

- Broadcasters
- Production Houses
- Content Providers
- Archiving Facilities

### Software Solution

- Get started on Day One
- Add/remove Baton engines, as required
- Take advantage of hardware performance improvements without getting bogged down by fixed hardware solutions
- Easily upgrade to newer version of Baton or add support for required audio/video essence





## Salient Features

### High Level Features

- Web based application that enables multiple users to access the system simultaneously using standard browsers
- Capable of handling large volumes of content in a distributed environment
- Easily scalable for verification workload increase
- Intuitive user interface with visual cues to enable easy scheduling of tasks and quick grasp of error results
- Executes in background mode with remote configuration and scheduling
- XML based API interface to integrate with studio workflows and asset management systems

### Verification and Reporting Features

- Compliance to media standards
- Easy to customize test plans based on custom requirements
- Automatic creation of test plans
- Extraction and verification of parameters and metadata in the content
- Detailed error description: error severity, location of error, and time code
- Reports in XML & PDF formats
- Incremental reports of tasks in progress
- Thumbnails of erroneous pictures
- Quick profiling of content without scheduling content for verification

### Task Scheduling and Monitoring Features

- Priority-based scheduling of tasks
- Easy integration with content servers
- Watch folder operation
- Task scheduling strategies to handle verification load
- Fault tolerance strategies
- Utilities to manage disk usage

### Post Verification Actions

- Email, TCP, UDP alerts
- Moving of qualified files to playback
- Moving of unqualified files to quarantine

## Some Baton Checks

### Container Level Checks

- Content layout • CableLabs VoD compliance
- Play time • File, Packet size • Teletext
- Number of audio/video streams • Ancillary data

### Video Checks

- Frame rate • Bit rate • Frame size • Aspect ratio
- Resolution • Duration • Video format • Coding type
- Color format • Close caption • Blockiness
- Black frames • Freeze frames • Black bars
- Color gamut • Luma/Chroma levels • Cadence
- Brightness • Contrast • Pixelation • Blurriness
- White point • Drop frame • Edge Jagginess
- Block error • Stripe error • Freeze frame

### Audio Checks

- Silence • Clipping • Mute • Test tones • Loudness
- Phase detection • Wow & Flutter • Transient noise

## Baton Supports

### Workflows

SD, HD, Mixed workflows

### Media Containers

MXF, GXF, DVB/ATSC/MPEG-2 Transport, ASF, MP4, AVI, AVCFF, MPEG-2 Program/DVD VOB, QuickTime, QuickTime Reference Movies, Apple ProRES, PhotoJPEG, Blu-ray, HD DVD

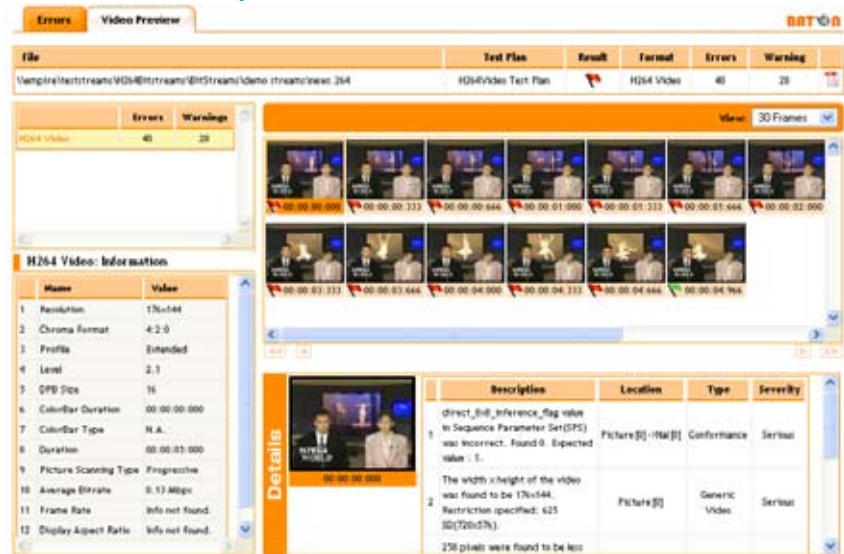
### Video Codecs

DV, D10, D11, MJPEG2000, Uncompressed RGB (in QuickTime), H.264, MPEG-2, MPEG-4, VC-1, IMX30/50, XDCAM

### Audio Codecs

AC-3, Dolby Digital Plus, MPEG-1/2 Audio, MPEG 2.5, MP3, AAC, AAC Plus, HEAAC, AES3, PCM, LPCM, ADPCM, BWF, AIFF, WAV, WMA (Standard & Professional)

## Detailed Verification Report



The screenshot displays the Baton interface with a 'Video Preview' tab selected. It shows a file path, test plan name, result status, format (H264 Video), and error/warning counts. A 'Video Preview' section shows a grid of video frames with red error markers. Below this is an 'H264 Video: Information' table listing parameters like Resolution, Chroma Format, Profile, Level, and Duration. A 'Details' section on the right provides a table of error descriptions, locations, types, and severities.

Item	Description	Location	Type	Severity
1	direct_ref_inference_flag value in Sequence Parameter Set (SPS) was incorrect. found 0. Expected value = 1.	Pictures[0]-[Nal[]]	Compliance	Serious
2	The width x height of the video was found to be 176x144. Restriction specified: 625 50(720x576).	Pictures[0]	Generic Video	Serious

## Test & Measurement Regional Sales

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