

15-Minute Guide to Pulse Video Analytics

What You Will Learn

As organizations capture and share more video for meetings, organizational communications, and training, people need easy ways to find videos based on content, and to search within videos to find relevant segments. This guide, intended for organizations that share video online, describes the value of Cisco Pulse[®] Video Analytics. An optional feature on the Cisco[®] MXE 3500 Media Experience Engine, Cisco Pulse Video Analytics:

- Automatically creates a vocabulary of relevant keywords for your organization by analyzing existing documents
- Identifies every place in each video where these keywords are spoken and where each speaker speaks
- Displays a list of speakers and keywords that appears beside each video: Viewers can go directly to relevant segments by selecting a speaker, keyword, or keyword spoken by a particular speaker.

Increase the Value of Video by Making It Searchable

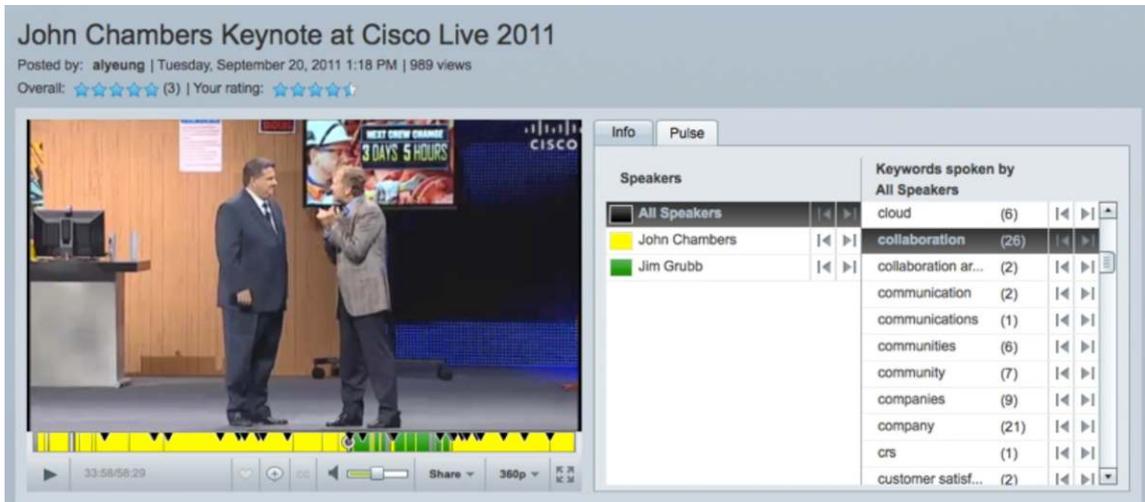
Viewing an entire 60-minute video to find a few seconds of relevant content is as inefficient as reading a 60-page document to find one paragraph. Word-processing and spreadsheet applications provide an easy-to-use search function; video-sharing applications need one, too.

Currently, however, people can search for video content based on only the title or manually entered keywords and tags. If you are interested in quarterly earnings but the person tagging the video neglected to include this phrase, you might never know the content exists. And if a 20-minute video appears in your search results, you have no way of knowing whether the keyword was spoken at the beginning or at the end of the video.

Solution: Cisco Pulse Video Analytics

Cisco Pulse Video Analytics, an option on the Cisco MXE 3500 Media Transformation Engine, increases the value of video content by making it searchable. The application uses speech-recognition technology to automatically tag video content by speaker and your organization's custom list of keywords. People can search for videos by speaker or keyword, and then go directly to relevant portions by clicking the speaker name or keyword from a list (Figure 1).

Figure 1. Cisco Pulse Video Analytics Identifies Speakers and Keywords Using Speech-Recognition Technology



The process works like this:

1. Point Cisco Pulse Video Analytics to a folder containing assets to create a vocabulary specific to your organization or department.
2. Capture the video. Without any action on your part, the Cisco MXE 3500 Media Experience Engine automatically transforms the video for publishing on Cisco Show and Share, which includes identifying keywords and speakers.
3. From Show and Share, people can search within the video by speaker, keyword, or keyword said by a particular speaker.

The term video analytics sometimes refers to software that records the number of people who watch a given video, their demographic characteristics, and so on. Cisco Pulse Video Analytics is different: it uses speech-recognition technology to identify speakers and spoken keywords so that you can search within videos.

Step 1. Point Cisco Pulse Video Analytics to company documents to create a vocabulary list of keywords:

Instead of manually assigning tags to each video, such as “quarterly earnings” or “growth projections”, you can direct the Cisco Pulse application to create a vocabulary list that is customized for your organization. Cisco Pulse Video Analytics uses speech-recognition technology to find these keywords in each video.

To build a vocabulary list, create a document repository containing Word, PowerPoint, PDF, and text files. The application analyzes the documents to create a vocabulary list, presented as a spreadsheet. Building a good vocabulary list typically requires about a thousand 20-page documents, or approximately 10 million words.

To remove keywords, simply delete them from the list. If you later want to add more keywords because your company enters a new market or changes its product names, for instance, simply refresh the document repository that the Cisco Pulse application analyzes.

Step 2. Let the Cisco Pulse application transform videos to make them searchable:

If you capture video with Cisco TelePresence® Content Server, the Cisco Pulse application analyzes the video as it flows to the Cisco Show and Share® video sharing application, without any action on your part. If the video is on your desktop or a server, simply upload the video file to the Cisco Show and Share system to start the process.

After processing, the Cisco Pulse application displays a list of speakers, a list of keywords spoken by each speaker, and a color-coded video timeline indicating when each speaker spoke (Figure 2). If the Cisco Pulse application detects new voice patterns, it identifies the speaker as “Unknown Speaker” until you provide the name.

Step 3. Easily search within videos:

When you search for keywords or speakers in the Cisco Show and Share system, a list of matching videos appears. Select a video, and then click a speaker name or keyword from the list to go directly to segments containing the speaker or keyword (Figure 3 and Table 1).

Figure 2. Click Arrow Beside a Speaker or Keyword to View the Next Place the Speaker or Keyword Is Heard

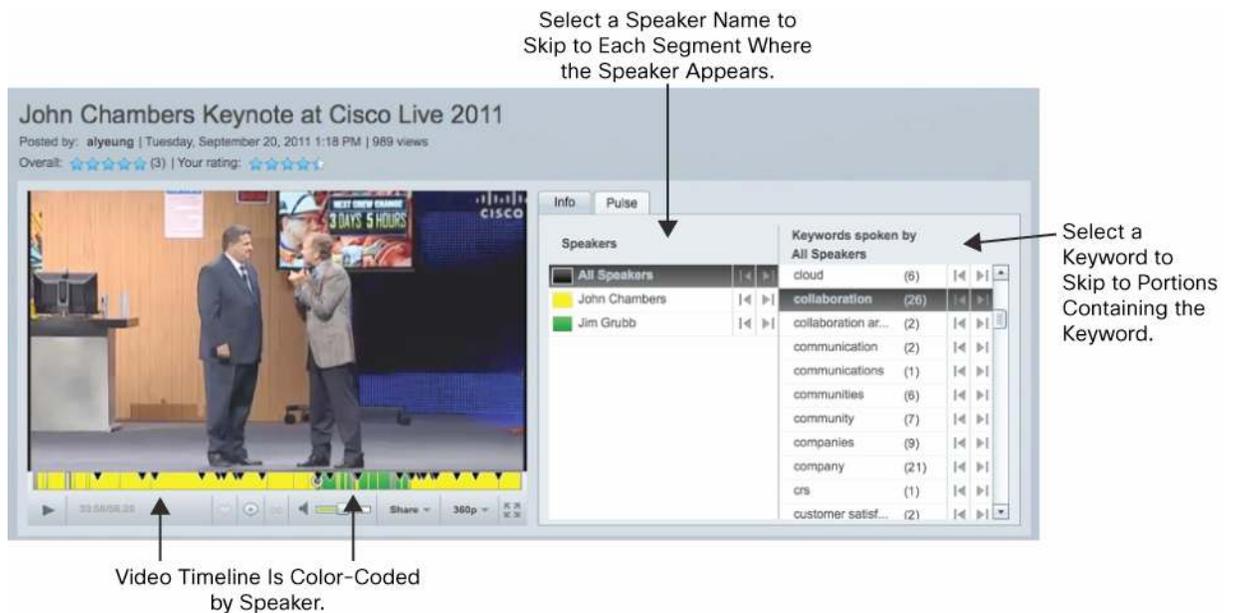


Table 1. Convenient Ways to Search Within a Video

Content of Interest	Example	What to Do
Speaker	Everything John Chambers said	Select the speaker name and click the left or right arrows to skip to sections where the person speaks. <i>or</i> Click the color associated with that speaker on the color-coded timeline beneath the video.
Keyword	Every time any speaker said “video”	Select “All Speakers”, and then select the keyword of interest.
Speaker and keyword	Every time John Chambers said “video”	Select the speaker name to see the keywords that person spoke, and then select the keyword to jump to those sections.

Cisco Pulse Video Analytics in Action at Moffitt Cancer Center

Located in Tampa, Florida, the H. Lee Moffitt Cancer Center & Research Institute works to advance the prevention and cure of cancer. To ease the burden for patients who live far away, Moffitt captures videos of orientation sessions and support groups that patients can watch conveniently from home. Moffitt also creates video for clinician education, ranging from grand rounds and unusual surgeries to the proper technique for lifting patients.

Staff members capture video using any device, including desktop PCs and Cisco TelePresence systems in conference rooms. A centralized Cisco TelePresence Content Server records the video and sends it to a Cisco MXE 3500 Media Experience Engine, which automatically transforms the video for viewing on different types of devices. At the same time, Cisco Pulse Video Analytics tags videos by keywords and speakers. People can search for videos based on speaker or keyword, such as “benign”, and navigate directly to that part of a video. Patients and staff can watch the videos any time, inside or outside the center, using the Cisco Show and Share video sharing application.

Conclusion

To manage the data deluge, employees and customers need tools to find relevant video content by speaker or keywords. Cisco Pulse Video Analytics makes the process easy, for both content creators and viewers. Automated keyword tagging saves staff time and minimizes the risk that people will not find a video because someone neglected to manually assign a particular keyword tag. The intuitive interface makes it simple for people to jump directly to relevant content, increasing the value of your organization’s video assets for meetings, organizational communications, and training.

For More Information

To learn more about Cisco enterprise video content solutions to capture, transform, and share, visit: <http://www.cisco.com/go/pulse>.



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