



TVU Partyline Technology is Key Component to Emerging 'Social Production' Remote Workflow



RTIL Enables Cloud-Based Broadcast-Quality Virtual Interaction and Collaboration in Real Time for Crew Members, Talent and Contributing Viewers in Different Locations

Introduction

The COVID-19 pandemic forced broadcasters to adopt new workflows with at-home anchors and reporters. Unfortunately, programming and workflows suffered from the inherent limitations of live video collaboration, as broadcasters scrambled to find new ways to create content. Despite advances in cloud-based production, crews that were required to assemble newscasts without a centralized studio operation lacked the resources to effectively communicate across multiple locations in real time.

Existing IFB and talkback systems are not easily suited to new remote production workflows, as setup and management can be difficult, particularly if there are rapid changes in participation. The systems also lack video, which is an essential part of social production for remote talent and crew, as body language is an important part of communication that supports the production flow. Return video is a potential solution, but it is difficult and expensive to setup for multiple remote contributors.

As a result of working with its customers, TVU Networks created TVU Partyline featuring a Real Time Interactive Layer (RTIL) that allows talent, crew, and even external content contributors to collaborate and interact from anywhere in the world as if they were in the same room. With broadcast-quality HD video and synchronized audio, TVU Partyline empowers content creators to move beyond the confines of traditional studio-based workflows, explore new ways to effectively pool resources from various locations, and create a new "social production" paradigm.

Basic Functionality

TVU Partyline enables production crews, talent, and even citizen journalists submitting user-generated content to interact in real time with millisecond low latency. TVU Partyline's RTIL is built "on top" of other tools such as TVU Producer for cloud-based production, allowing for efficient, real-time broadcast quality communication and collaboration between all participants, creating a virtual work environment. The separate layer allows TVU Partyline to initiate a high-quality video conference that can interact with other parts of the TVU ecosystem and scale to meet the needs of various productions.



TVU Partyline is a Real Time Interactive Layer that sits on top of other production tools, permitting remote interaction and collaboration between participants.

TVU has developed an interface that is similar to many familiar video conferencing platforms, removing the technical hurdles of participation. Although directly integrated with TVU Producer, TVU Partyline participants only need access to the public internet, though the technical producer can start the meeting within a private network. All TVU Partyline communications are encrypted and kept secure in the cloud.

There are three types of TVU Partyline participants: production staff, talent, and external audience members. Once a technical producer creates a session by pressing the on-screen "Start Party" button, other participants can join via a link, which opens TVU Partyline in a Google Chrome browser on Android and iOS devices. As participants join through the shared URL, their images appear in the browser interface.



Remote participants collaborate in a TVU Partyline session through their mobile device and the TVU Anywhere app.

With minimal setup, TVU Partyline provides an easy way to add a remote guest to a program. It can manage hundreds of callers within a single session, and is scalable to handle larger and smaller production crews. The awkward pauses commonly experienced in traditional video conferencing platforms are eliminated, because all participants are synced in the same constant milliseconds delay. TVU Partyline delivers HD video and two-channel stereo audio, and mix-minus audio engineering eliminates echoes and feedback, so there's no need for headphones.

Social Production Applications

From the TVU Partyline platform, users can discuss the production with people in the field and review potential content for live and pre-recorded programming. To share content for the production, contributors can do so from a browser or use the TVU Anywhere app (Version 9.0 or higher). Contributors can also monitor the final program output in real time within the same web browser interface as the TVU Partyline interaction.

For example, production crews can coordinate production efforts with several citizen journalists at the scene of an event. With TVU Partyline, the CJs can join the conference through a web browser and share content for a cloud-based production from their personal devices via TVU Anywhere. As a result, the broadcaster can have a makeshift multi-camera production, even if a professional news crew is not on the scene. The production can also share footage from CJs in different locations and provide a regional or even global perspective.

Content contributors can use the front and rear cameras on a cell phone or tablet as part of the production. The rear camera, for example, can be used for face-to-face communication with the team. When the feed is switched to the front camera, the director can provide instructions for positioning shots or selecting people to interview.

To manage content and personnel, the producer can create groups so certain participants, such as CJs, have only limited access to the production discussion. A voice-only mode is also available, and audio can be output to the left or right channel so talent and crew instructions are not grouped with comments from outside contributors.

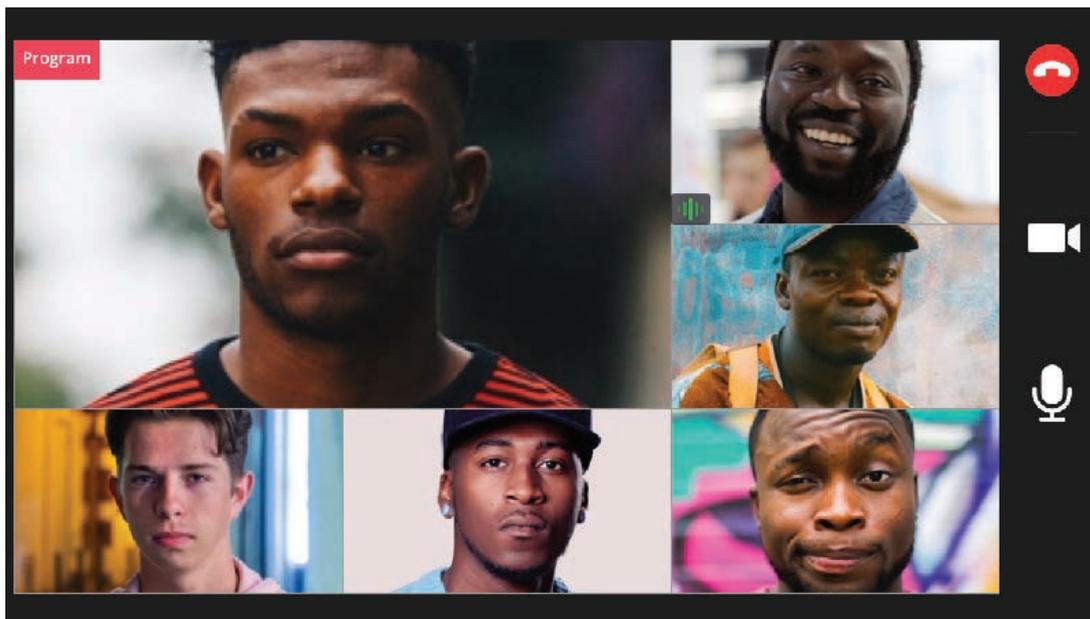
While most social productions will probably include less than a dozen participants, why would TVU Partyline need to support hundreds of users? The answer is to offer this functionality to vertical markets that want even more audience engagement. Social production is designed to not only bring crew members together from various locations, but to encourage and include audiences in the program. Sports productions, for example, may want to add audience comments, reactions, and discussions into live coverage. Based on the size and availability of the fan base, producers could have access to hundreds of audience members during a given contest or across an entire season. Beyond broadcast applications, corporate enterprises could use TVU Partyline for more effective videoconferencing for company-wide meetings.



TVU Partyline enables interactive remote press briefings between team personnel such as a coach or a manager and reporters as if the traditional briefings were taking place in the same room. The coach or manager has an array of easy to use options to manage a virtual briefing at their fingertips such as allowing one-on-one or group Q&A.

TVU Partyline Advantages

Through TVU Producer, TVU Partyline helps deliver true broadcast-quality cloud production. Video and audio sources are synced in the cloud automatically, regardless of where the sources are located. As a result, the technical director gets a true, frame accurate preview of sources that are in use, which allows switching decisions based on what is seen. The system then delivers a frame accurate finished product to the program output.



As illustrated, TVU Partyline offers a familiar user interface and seamless access for participants, but there are noticeable differences for video production professionals. TVU Partyline advantages over standard video conferencing platforms for live video production include:

- synchronized audio and video
- mix minus audio to avoid feedback
- customization of participant access and audio feeds
- live monitoring of program output
- signal routing to any location
- undetectable latency
- guests can see both the host and the live program at the same time
- native integration with TVU Producer, TVU Anywhere and other TVU products

As any live production producer will acknowledge, the show must go on. That's why every TVU Partyline session is created and managed in the cloud. As a result, if the producer who begins the meeting signs off or loses internet connectivity, the live session continues. In fact, the loss of any participant will not stop the live interaction – TVU Partyline continues without interruption.

TVU has applied the same transmission standards as its broadcast solutions to TVU Partyline to deliver real-time collaboration at the best possible quality. The company's patented IS+ transmission protocol ensures high-quality HD video and signal resiliency throughout the TVU Partyline session, no matter how many participants join. IS+ supports any video feed, including 4K and 5G signals, to meet the needs of traditional media and new media workflows. Its patented Inverse StatMux (statistical multiplexing) transmission algorithm removes any potential delivery issues to ensure the highest quality video at the lowest latency possible during transmission.

Beyond cell phones, TVU Partyline is compatible with external audio and video sources including SDI, NDI, and SRT. TVU Partyline can receive content from sources that are connected via TVUPack, TVU MLink, TVU Nano, and TVU Grid.

While COVID-19 has sparked the concept of social production, the pandemic does not signal the end of cloud-based live production with remote crews and talent. From navigating natural disasters to embracing workflows built around teams located around the world, TVU Partyline provides TVU customers with the synergy of live production and a professional video conferencing platform. Although TVU Partyline was launched in May 2020, TVU is already working toward improving the platform based on user feedback. In the coming months, the company is looking to provide more sophisticated participant management and expanded support for integration with other products throughout the TVU ecosystem.