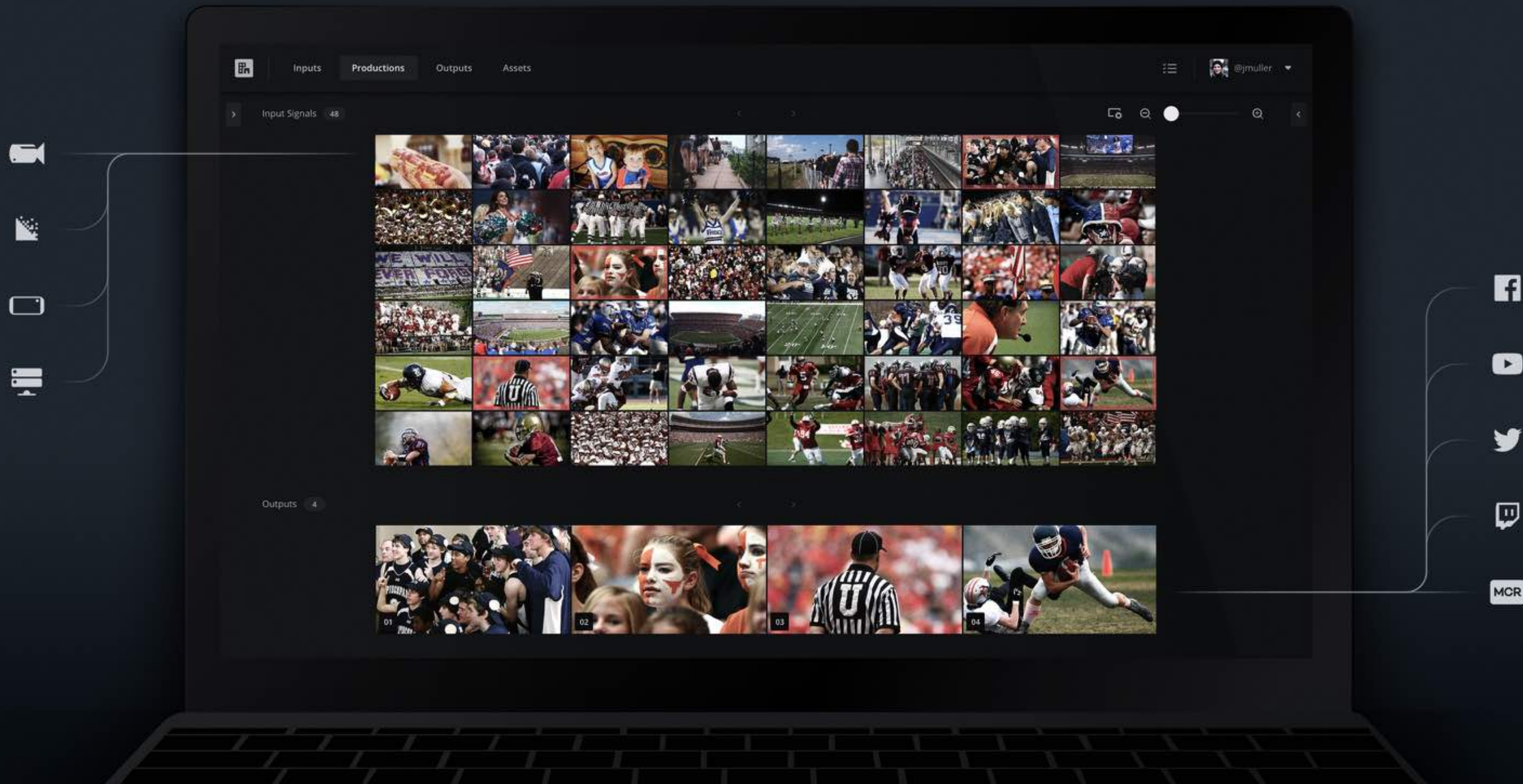


Live Video Cloud

Cloud control for live video.



Benefit from our cloud-based infrastructure for live video workflows.



Fast

Get relevant content as it happens.

News

SRF • RTL2 • BR • SWR



Flexible

Decentralize and scale productions.

Sports

MLB • FOX Sports • PlayOn!



Connective

Activate and enable audience participation.

Entertainment

Viacom Int. • NBCUniversal



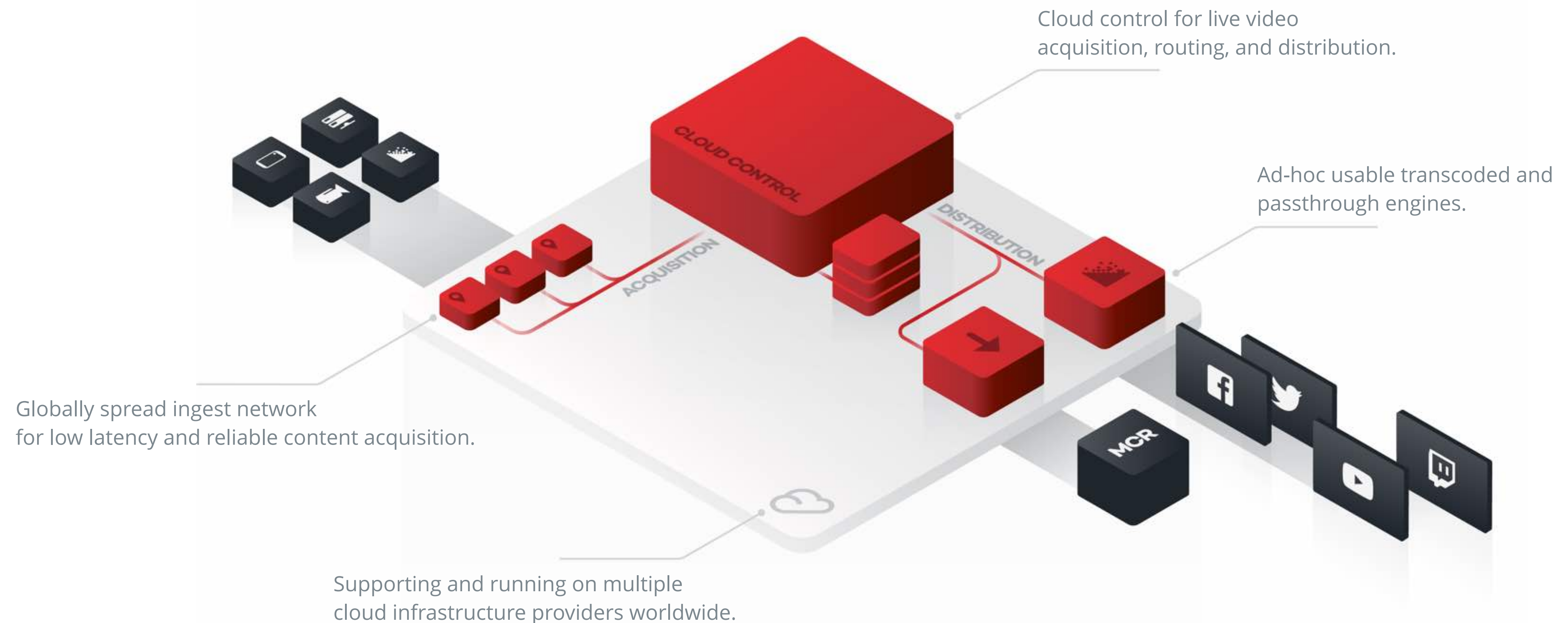
Scalable

Extend brand reach and monetization.

Esports

Warner Bros. • ESL • DreamHack

Designed for evolving needs. Running on Azure, AWS, and Google Cloud.



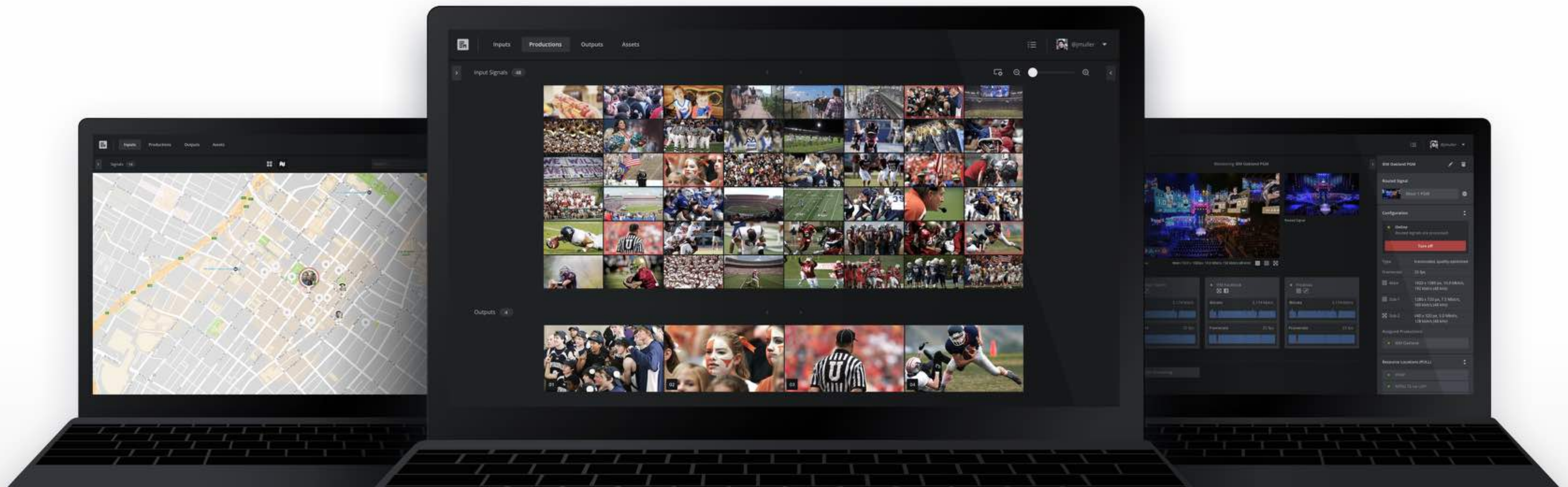
Live Video Cloud

Cloud control for live video.

Acquire unlimited concurrent live feeds from professional cameras, encoders, mobiles, drones, and online sources.

Curate and route live signals within a continuous playback multi-view to unlimited outputs and allocate content wherever you need it to be.

Distribute live signals simultaneously to unlimited destinations online and to traditional broadcast infrastructure.

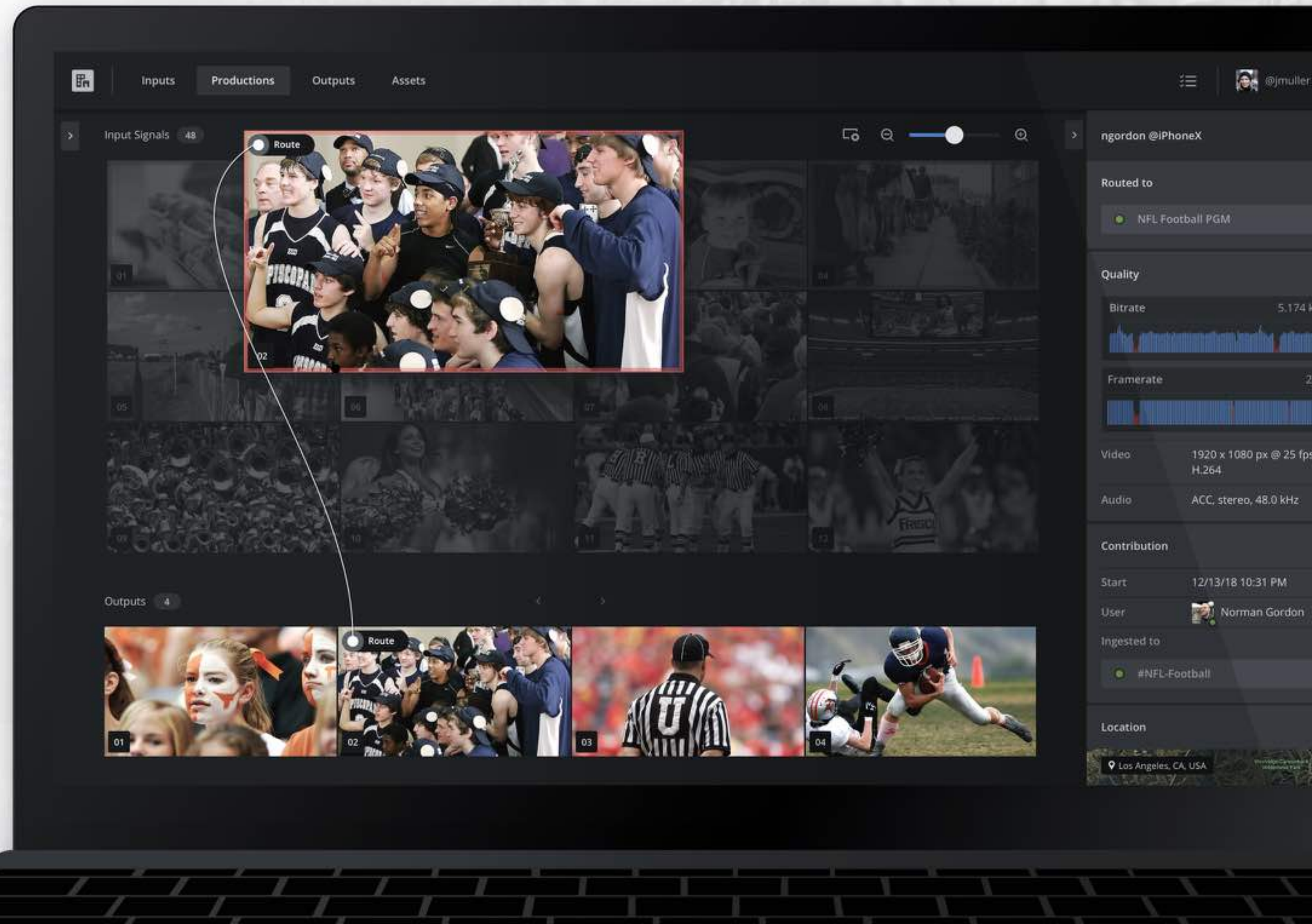


Live content curation at scale.

Discover, qualify, and route.

User Story

- receive live signals from mobile apps/browsers, pro-cameras, encoders, or drones
- monitor up to 48 signals in a continuous playback multi-view
- qualify content for distribution via timecode-based switching or latency optimized routing
- deliver selected feeds to up to 10 destinations per output with an unlimited number of outputs

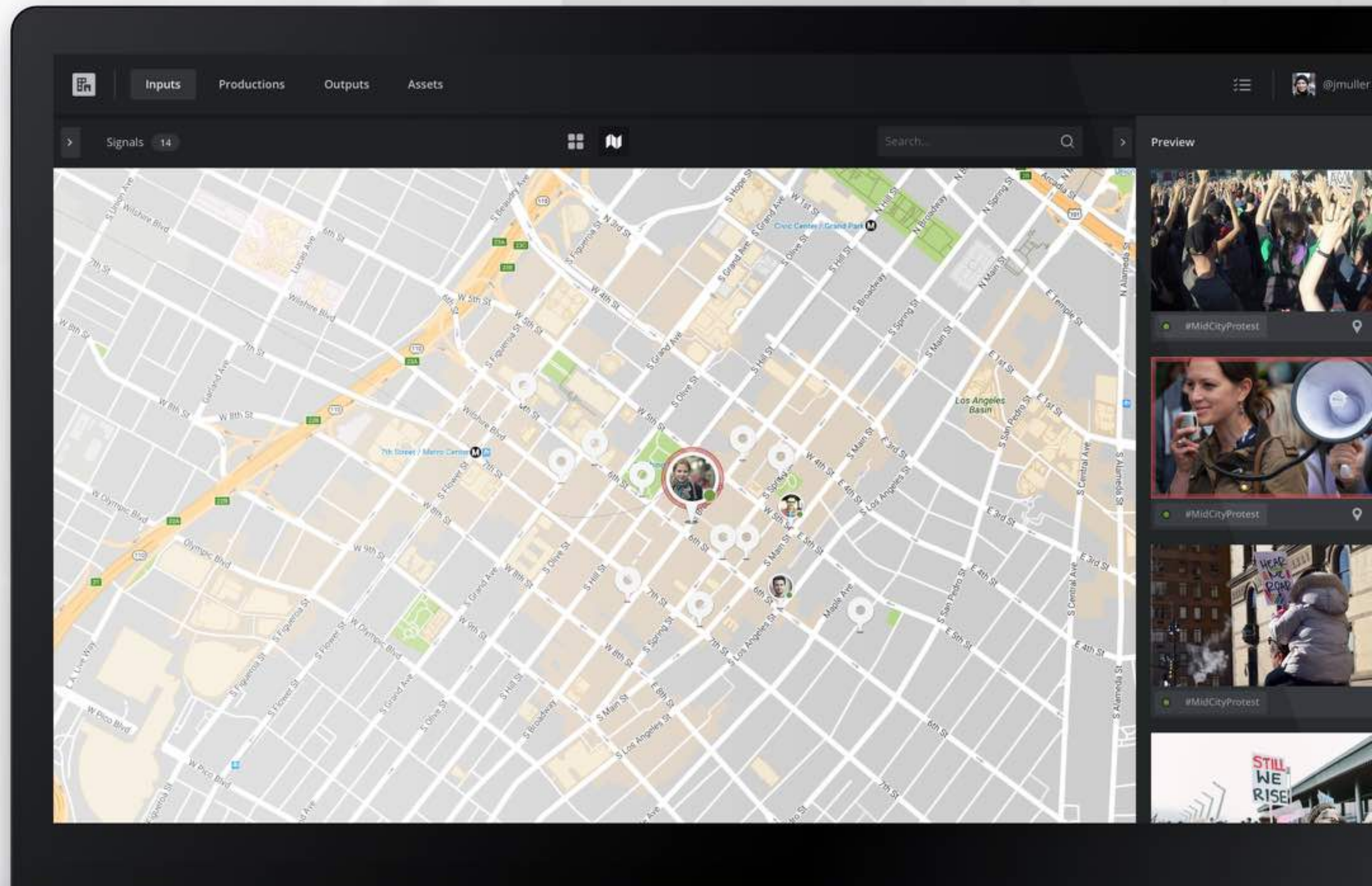


Live and near-live content acquisition.

Receive, screen, and use.

User Story

- receive live signals from mobile reporters and citizen journalists via mobile apps/browsers or pro-cameras and encoders
- filter and explore sources by configured inputs and location
- route qualified content to, e.g., newsrooms, mixers or directly to social
- access and allocate recordings from the first minute for usage in other systems via timecode-based segment transfer

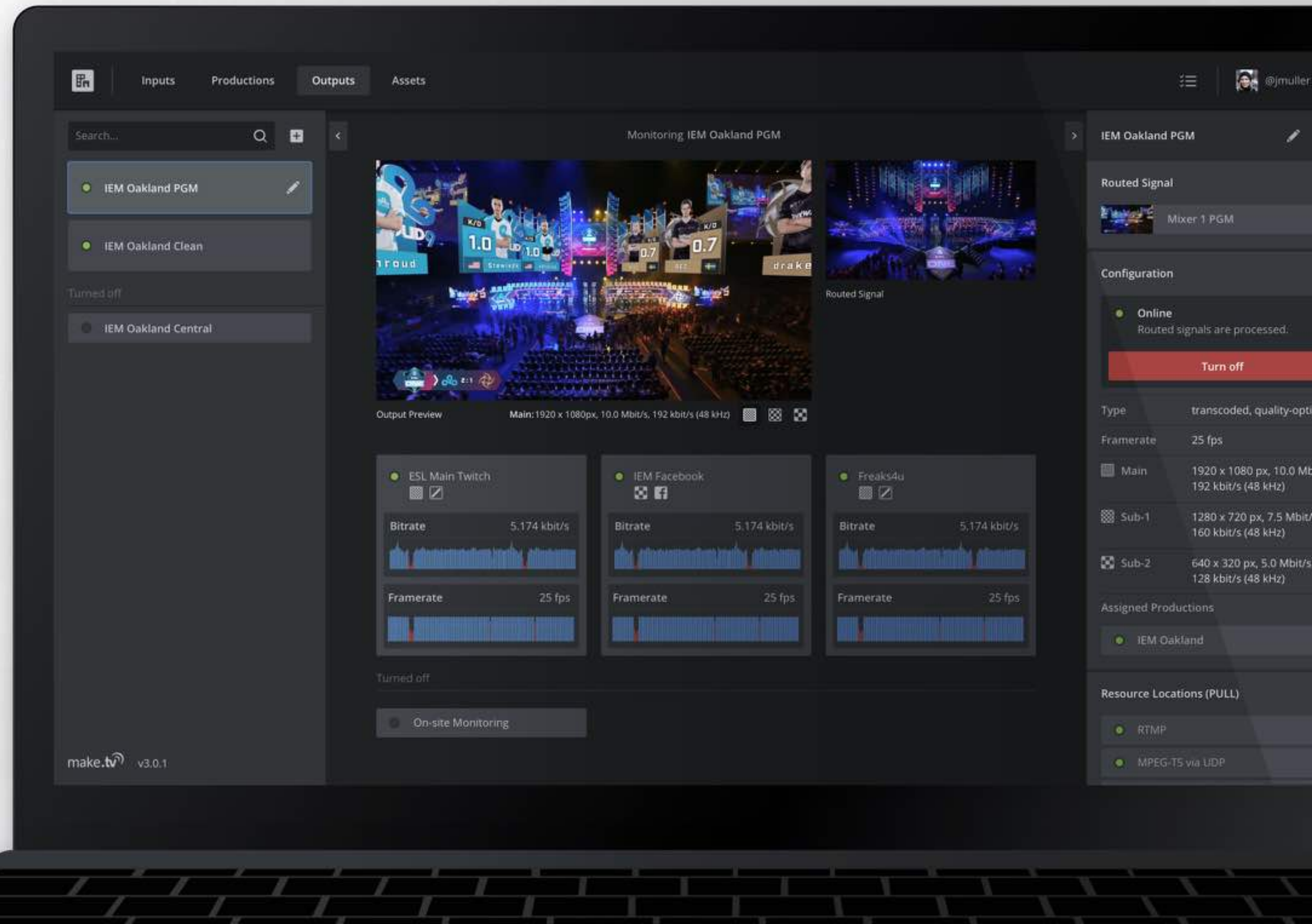


Signal connection health monitoring.

Route, distribute, and supervise.

User Story

- route ingested signals via passthrough or multi-bitrate transcoding
- reach up to 10 destinations per output
- control and monitor signal connections for each destination

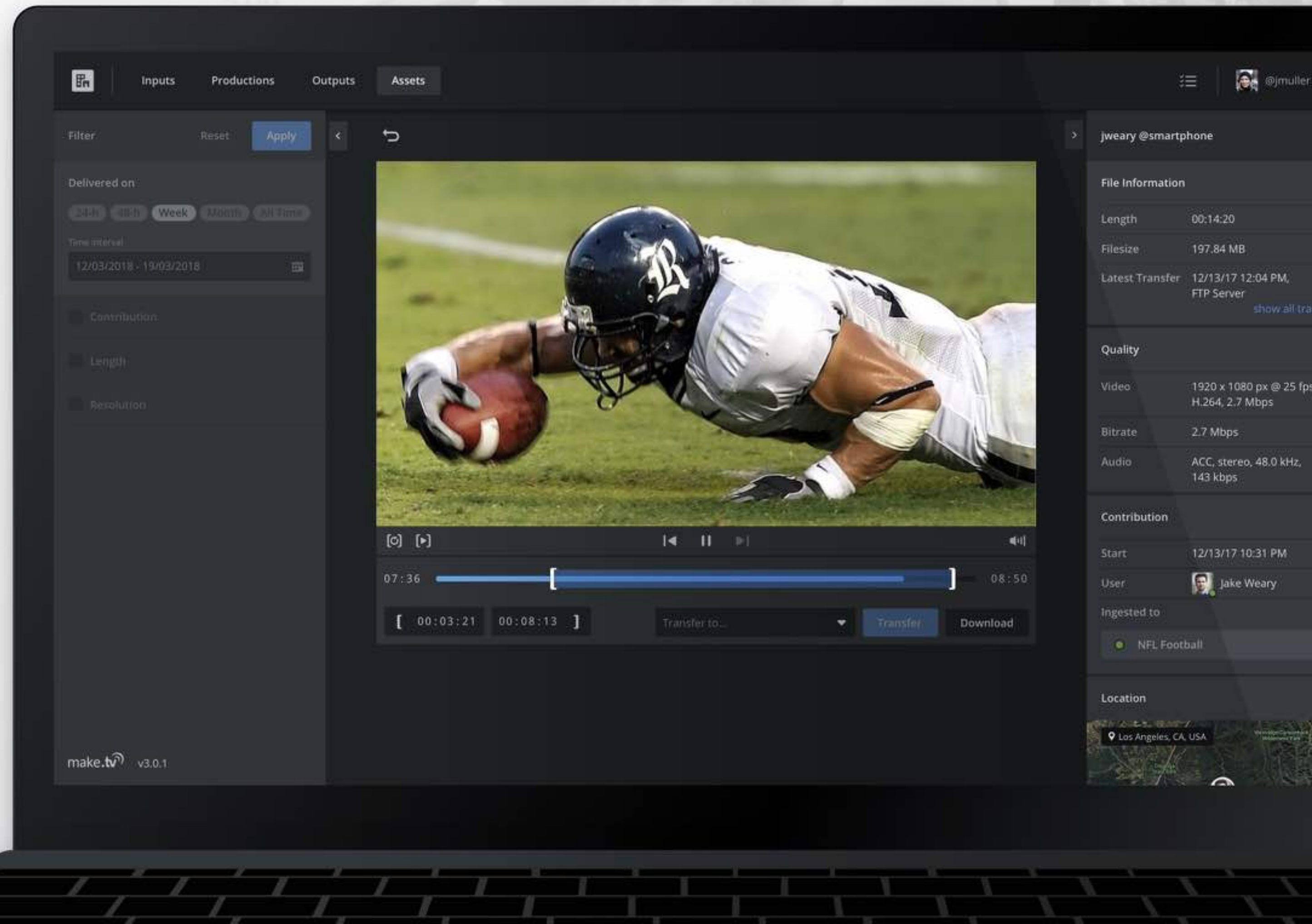


Asset and segment transfer of recorded streams.

Filter, trim, and allocate.

User Story

- filter recordings by metadata such as creation date, length, or contributor
- access completed and on-going recordings (growing files) for screening
- transfer files or selected timecode segments to third-party storages or local machines



System Characteristics

Live Ingest

Ingest an unlimited number of concurrent live signals from pro-cameras/encoders, mobiles, and online sources.

RTMP push via capable hard-, software, and services (port 1935)
WebRTC via capable mobile and desktop browsers
IFB/Return Channel to connected WebRTC clients via UDP
H.264, AAC level 3.x to 4.0, higher levels are experimental, up to 1080p60
Global ingest network multi-geographical live source ingest for low-latency and reliable content delivery
High-res. signal bandwidth cap bandwidth cap per incoming connection at 25 Mbit/s
No ingest signal limit unlimited concurrent ingested live signals

Recording

Automatic recordings of ingested live signals.

Recording of live signals automatic recording of all ingested signals
MPEG-TS container assets as MPEG-TS (.ts) using ingest format
Filter recordings/assets by user, date, and format
Access on-going recordings recordings (growing files) are accessible for screening, transfer, and download from the first minute
Trim assets for transfer and download cut based on video segments, actual in- and out-points may differ up to 10s from selection
Asset download and transfer download via HTTPS, transfer via FTP
No recording limit unlimited concurrent recordings, new asset every 8h

Curation & Control

Visual and metadata supported content curation for easy, and fast decision-making.

Continuous playback multi-view with up to 48 live signals per page and unlimited pages, zoom levels for 1, 4, 12, 24, 36 and 48 signals, decoding limit for continuous playback: 12 x 720p60 per tile
Signal routing connect live signals to unlimited outputs
Low-latency delivery via passthrough
Connection health monitor signal bitrate and framerate
Thumbnail previews updated in ~10s intervals
Geo-Location explore content on map view
Filter live signals by production, user, and input

System Characteristics (cont'd)

Live Distribution

Distribute live signals simultaneously to unlimited destinations online and to broadcast systems.

Multi-bitrate transcoding

up to 3 qualities per transcoded output, H.264, 0.1 to 20 Mbit/s, 240p, 360p, 480p, 720p, 1080p with 25, 30, 50, 60 fps, AAC, 32 to 320 kbit/s

Low-Latency passthrough

using ingest format

Fixed Buffer Option

enabling increased synchrony between outputs

RTMP push

up to 10 destinations, including quality selection per destination for multi-bitrate outputs, including RTMPS

RTMP pull

via port 1935

MPEG-TS pull

via TCP, port 7777

Apple HLS pull

via HTTPS, port 443

No output limit

configure and use unlimited concurrent outputs

Setup Configuration

Easy and flexible setup configuration including runtime changes with reliable signal connections.

Productions

configure setups based on your needs of inputs, continuous playback multi-views, and outputs

Inputs

configure public and private invites or protocol based sources for allocation to productions

Outputs

configure transcoded and passthrough outputs for usage in productions

Runtime changes

add and remove inputs and outputs without interrupting the running production; add, remove, enable, and disable destinations without interrupting active connections to other targets

Access & Management

Use the system wherever you are and manage productions, users and accounts.

User roles

divide your team into Manager, Editor, and Contributor

OAuth connections for social

manage accounts on Facebook, YouTube/Google, and Twitch via OAuth connections without sharing credentials

Transfer targets

configure asset transfer destinations while keeping your credentials secure and avoiding complicated workflows

Access from anywhere

recommended: Google Chrome, 10 Mbit/s, via HTTPS, viewport of 1440 x 600 px or higher

Thanks for your attention.

Questions? We are always available.



Consulting



Integration



Training



24/7 Support

About Make.TV

Make.TV lets broadcasters and producers in the fields of News, Sports, Esports, and Entertainment, acquire and curate an infinite number of live video feeds from mobiles, social media platforms, professional devices and traditional broadcast infrastructure. Using a browser-based continuous

playback multi-view, video streams are easily curated and played out simultaneously to broadcast systems and social media platforms like Facebook Live, YouTube, and Twitch. Make.TV's customers include Major League Baseball/BAMTech, ESL/Turtle Entertainment, Bayerischer Rundfunk, SRF/TPC,

SWR, FOX Sports Brasil, NBCUniversal, MTV/Viacom, Warner Brothers and DreamHack. Make.TV is a venture-backed software company based in Seattle, Washington and Cologne, Germany. Make.TV's investors include Microsoft Ventures, Voyager Capital, and Vulcan Capital.