

Deliver Interactive, Broadcast-Quality Content at Scale Using the Integrated Offering of Phenix and Zixi

REAL TIME – IN SYNC – AT SCALE

HIGHLIGHTS

PHENIX INTEGRATES ZIXI

Phenix leverages the Zixi protocol to ingest content into the company's next-generation interactive video delivery platform.

KEY FEATURES

- Real Time video delivery
- Synchronized content delivery to all viewers
- Broadcast scale and automated flash crowd handling
- Multi-format ingest including Zixi sources with industry leading resiliency and security
- Geographically distributed high availability network
- Private fiber network and zero-ops architecture
- Zero ops architecture on a private fiber optimized for speed and resiliency

PROVEN EXPERIENCE

- Millions of viewers without stuttering, buffering or crashing
- Observed concurrents: 500,000+
- Observed join-rates as high as 50,000/second without buffering, stuttering or crashing
- Time to first frame (TTFF) of less than one second
- Uptime: 99.997%
- 40,000 requests per second while maintaining median response time <1 millisecond

PHENIX'S INTERACTIVE VIDEO DELIVERY SOLUTION LEVERAGES ZIXI INTEGRATION

As a leader in delivering interactive video at scale, Phenix powers innovative digital experiences that drive acquisition, engagement and retention of customers for some of the world's biggest brands. Phenix has integrated Zixi's award-winning Software Defined Video Platform (SDVP) which has been adopted by over 1000+ media customers enabling Phenix clients to ingest broadcast quality content from a variety of different sources over the industry-proven Zixi protocol and take advantage of unique features such as:

- **Bonded Delivery**
Combines disparate topologies including 5G, LTE, Leased Lines, and Unmanaged Internet, dynamically adjusting for fluctuating bandwidth, network congestion, packet loss and latency differences
- **Network Efficiency**
Reduces egress costs up to 30% - 50% when compared to other protocols
- **Compute Efficiency**
Reduces compute costs up to 50% by utilizing highly efficient ARM-based processors
- **Connection Validation**
Industry-leading security including DTLS connection security and content encryption
- **Sequenced Hitless Failover**
An improvement on SMPTE 2022-7, applies Zixi optimized alignment algorithms to re-create a single coherent uninterrupted stream out of multiple stream fragments
- **Reliability**
Enhanced stream resilience with congestion aware routing and patented dynamic forward error correction (FEC)
- **Optimized Delivery**
Quality optimized delivery with content aware bandwidth shaping

POWER NEXT GENERATION INTERACTIVE GLOBAL EXPERIENCE TO MILLIONS OF VIEWERS

Phenix was designed from the ground-up for both, speed and scale. Its patented technology is essential for delivering content in real-time that engages audiences with interactive experiences and generates revenue for sportsbooks, sports and gaming properties as well as broadcasters delivering real-time video to global audiences at broadcast scale. Trusted with streaming video for world class events such as the Super Bowl, The Oscars and Cheltenham Festival, Phenix brings proven experience delivering video to millions of viewers for the world's highest profile events. Phenix provides the following key benefits:

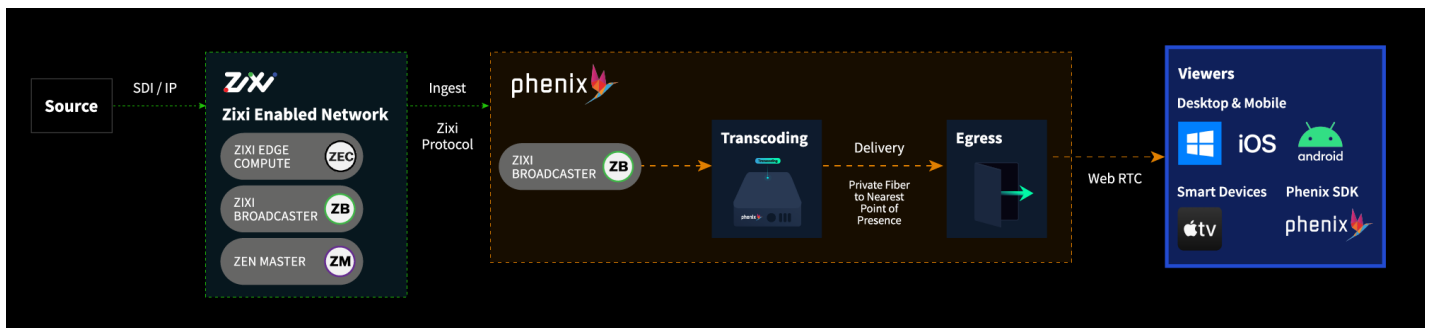
- Real-time video delivery with less than half a second end to end latency
- Patented SyncWatch™ technology delivers video to all devices at the same time, regardless of geography or network conditions
- Broadcast scale and automated flash crowd handling
- Reliable delivery via a geographically distributed, high availability network with more than 30 Points of Presence spread around the world
- Zero ops architecture automatically detects and corrects faults without manual intervention
- Multi bitrate adaptive streaming and patented dynamic ABR encoding monitors network conditions and dynamically adapts so each viewer receives the highest quality video for their connection without sacrificing speed
- Ingest from a wide variety of encoders and protocols including Zixi and delivery to virtually any device or platform
- End-to-End encryption and token authentication enables accessibility for any video session

INTEGRATED HIGH EFFICIENCY TRANSPORT AND PROCESSING FOR CUTTING EDGE APPLICATIONS

Phenix's scalable real-time video delivery combined with Zixi Broadcaster's broad spectrum of ingest formats and ZEN Master's ability to examine and orchestrate content streams through the pipeline unlocks new possibilities for innovative use cases such as:

- Broadcast**
 Eliminate spoilers and enhance the viewing experience with sub-second video delivery synchronized across all devices, regardless of geography or network conditions.
- Group Video Chat**
 Live video chat with groups of any size, without freezing, stuttering and frustrating caps on the number of participants.
- Multi-Camera Viewing**
 Enable viewers to watch a single event from up to seven different camera angles, all with sub-second latency and in complete synchronization.
- Celebrity Connect**
 Live conversations between fans and a celebrity host, focused on primary content such as a sporting event or an interactive press conference. The resulting conversation is shared with the entire audience alongside the primary content to provide a fully interactive real-time experience.
- Watch Parties**
 Build next-gen audience engagement experiences where friends can hang out, or watch and bet on real-time content together. Phenix's patented SyncWatch™ technology synchronously delivers video to all devices, regardless of location or network conditions.

PHENIX INTEGRATES ZIXI ENABLED NETWORK FOR GLOBAL INGEST, PROCESSING AND DELIVERY



Customer streams can be ingested into Zixi Broadcaster. Once processed, the streams are handed over to the Phenix Encoder which feeds the Phenix Cloud via Phenix's Interactive Transport Protocol (ITP). A WebRTC stream is then generated and distributed to clients using Phenix's standard output methods utilizing resilient infrastructure and multi-cloud architecture.

ABOUT PHENIX

As the proven leader in delivering interactive video at scale, Phenix partners with content owners and media companies to power innovative experiences that drive revenue through user acquisition, engagement and retention. Trusted by the world's best-known brands, Phenix's patented technology delivers synchronous, real-time video to global audiences at broadcast scale.

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ABOUT ZIXI

Zixi provides the cloud based and on-premise Software-Defined Video Platform that enables reliable broadcast-quality video delivery over any IP network, any protocol, any cloud provider and any edge device. Over 15+ years, the Zixi Enabled Network (ZEN) of partners has grown to over 400+ OEM and service providers with whom Zixi serves well over 1,000+ customers representing most of the top media brands around the world with 20,000+ channels delivered daily, with 110,000 deployed instances in over 120 countries, gathering over 9 billion data points a day while delivering over 100,000 live sporting events a year.

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