

Powering the Next Wave of Television Services

Abstract

With over twenty years of experience, Minerva Networks is the leading provider of video service management platforms. Its cloud-native platforms provide the scalability to power advanced television services to millions of users worldwide, along with the ability to reduce the operational burden and time to market for service providers.

As an early adopter of streaming technology, Minerva recognized the opportunity presented by the paradigm shift of consumers moving from a world of centrally controlled video delivery to one of user-centric content consumption accessed through online streaming.

A decade later, Minerva continues to lead the way by extending its platform to exploit the unique capabilities of artificial intelligence, virtual reality, and blockchain to create the next level user experience to allow consumers to easily discover the content they love and enjoy it whenever, wherever, however, and with whomever they want.

The next wave of television services (TV 3.0) will revolutionize how content is monetized, consumed, and shared, while creating new benefits for subscribers, advertisers, and service providers. With TV 3.0:

- Users can enjoy access to more content and highly-personalized and social experiences
- Advertisers gain more control, a better ROI, reduced click-fraud, and higher efficiency
- Service and content providers gain access to a new world of subscriber monetization and engagement tools.

Pay TV: A New Equilibrium

Despite “cord cutting,” hundreds of millions of consumers worldwide still want, and prefer, an integrated television experience. Traditional Pay TV players must adapt and evolve. High subscription costs, loss of exclusive content, the lack of personalized engagement opportunities, and competition from direct-to-consumer initiatives, are forcing operators to rethink their approach. Also, advertisers now insist they have access to the same controls and transparency as those available in web and mobile advertising. Without it, they are pulling back their significant broadcast TV spending in favor of streaming.

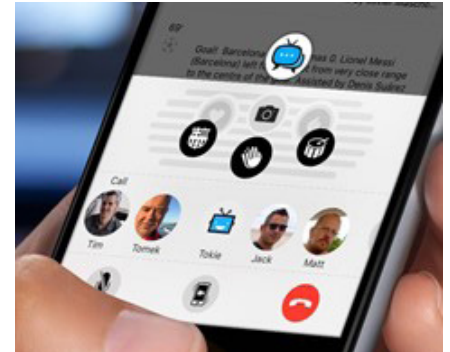
Legacy TV (TV 1.0) was defined by the delivery network—closed and monolithic. Streaming ushered in TV 2.0 with massive increases in available content and new business models. It will take new approaches to methods of discovery, consumption, and monetization to drive the next wave of television services—TV 3.0. As with any industry transition, the winners in this upcoming television landscape will be innovative early adopters that creatively apply the newest technologies to power compelling television experiences that both attract and delight subscribers.

Powering Television 3.0

Minerva is expanding its solutions to include dynamic ad-insertion, artificial intelligence, virtual reality and blockchain technologies. When applied creatively, they combine to create new television discovery, viewing, and monetization experiences.

Advertising plays an important role in the Minerva solution. Targeted advertising provides a powerful revenue source for the service provider, content owners and users. Minerva's dynamic ad-insertion solution provides advertisers with additional insight to their audience's preferences and viewing habits, allowing for more powerful targeting and higher conversions. Subscribers will be able to enjoy compelling ad-sponsored content for free while watching ads that are relevant to them. Service providers will be able to offer free ad-supported video services to all their broadband and mobile subscribers, adding "stickiness" to those services while also providing a cross-selling upgrade path to premium TV.

Sports is a key driver for premium TV services. Minerva takes advantage of the popularity and intense fan interest to create new ways to watch and interact with sporting events. Using artificial intelligence technology Minerva analyzes live events in real time and generates personalized highlights with options to drill down into favorite plays or players.



Live events, and TV in general, are most enjoyable when shared with others. The Minerva solution features an integrated social platform that creates new levels of engagement around the content not offered through other services. Social features not only appeal to consumers, but they also deliver value to the service provider as they increase subscriber engagement, retention, and new subscriber recruitment.

Engagement is a key aspect of TV 3.0. By keeping subscribers engaged with content via recommendations, personalized sports highlights, or watch parties, subscribers are more likely to renew their subscription and become promoters of the service. Loyalty points earned by frequent viewers can be redeemed for access to premium content (for example, a movie or a sporting event), participate in a private group chat with a celebrity, or bet on the outcome of a live event.

More engaged users also create more opportunities for interactive advertising not available with in-line video ads. Dynamic ads placed in the user interface can be used to expose key features, promote other services, or simply present a linked ad to a local business.

Minerva makes its platform APIs available to developers of complementary third-party applications so popular local services can easily be integrated. Depending on the local market dynamics, third-party applications for rewards programs, fantasy sports leagues, gambling, fun betting, or other interesting services can be integrated.

A Glimpse of The Future

Consumers will be able to enjoy their favorite content in exciting new ways. Here are just a few examples:

TV in the Metaverse

John has received a text message from his friend Mark inviting him to watch their favorite soccer team. When the time comes, John taps the link embedded in the invite and is prompted to enter Mark's room. John's avatar, wearing his team's jersey, joins Mark for a chat before sitting on Mark's couch to watch the game and cheer together. As a memento of the fun time sharing the game with his friend, John and Mark take a group selfie.

Fun Betting and Celebrity Meetups

Andy often participates in sponsored live betting while watching NFL games. Twice he managed to do well enough to be invited to a half-time virtual party. It was fun meeting a legendary player and even getting a certified group selfie (NFT) with him.

Personalized Sports Highlights

Randy has just boarded an Uber ride to the airport. He will spend the next 20 minutes watching the personalized highlights of the NBA game he missed earlier in the week.

Virtual Concerts and After Party

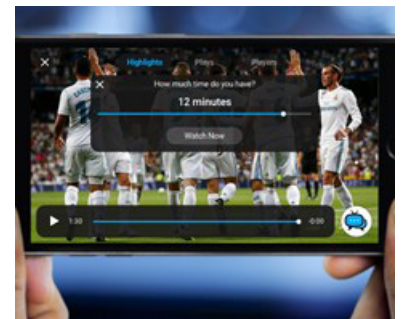
Alexandra likes to attend live virtual concerts with a group of friends. They wear spunky outfits, socialize and dance together. At the last event, they even got their picture taken with the artist. Their NFT has received a lot of likes on social media.

With Minerva, many of these exciting experiences are already available today.

Smart Highlights Redefines Recordings

The Minerva Smart Recordings feature takes a plain vanilla sports recording and makes it interesting and smart! Smart Highlights goes beyond compressing a game into a short form video snippet. Instead, users are given control to personalize the highlights to match their areas of interest and available time.

This award-winning feature gives users personalized control over their recordings. In a hurry? Ask for a two-minute highlight reel. Have a favorite player on your fantasy team? Gen up a highlight reel of best action for that player. Only interested in three-point shots? No problem. Click and enjoy.



Minerva is also exploring how to use the same AI and machine video technology for non-sports programming.

Watch With Me

“Watch With Me” brings family and friends together to enjoy TV even when they are apart. The host can start a session by sharing a link via email or text. Once everyone has joined the session, participants can talk, text chat, video chat, take group selfies, and express themselves with audio cheers and jeers!

Meet in the Metaverse

Interact with your friends in a personalized virtual meeting room. Decorate your walls, select your furniture. Have a party. Watch TV on one wall. Appreciate the digital collectable items displayed on the walls or tables. Mingle, chat, converse, and play fun games of chance as you watch the game.

Social Selfies make TV memorable

Get togethers always seem to include group selfies. So too with “Watch With Me”. Participants can initiate a group selfie and using a countdown timer, everyone takes their own picture. Individual pictures are then collected and composited into a single image with the program poster as part of the background. As with any other photos, group selfies can be stored in the user’s photo gallery and shared with friends.

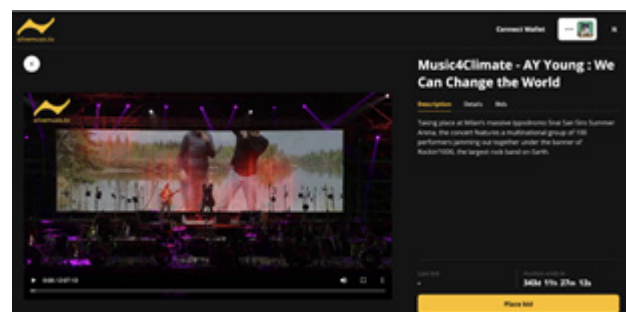
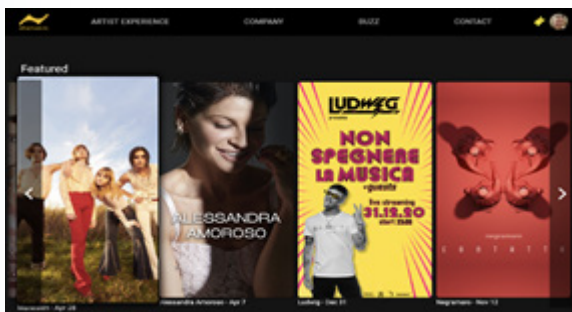


Stadium sounds make TV come alive

Fans can feel the energy of a stadium at their fingertips. With the “Watch With Me” custom sound carousel, fans can share cheers and applause noises with friends while never leaving the game.

Monetize Digital Collectables with NFTs

Non-Fungible Tokens (NFTs) allow content creators to securely monetize their content. Leveraging blockchain technology, NFTs act as digital certificates to authenticate an asset as well as confirm its owner and document its full chain of custody. When applied to video content, snippets can be captured, packaged, and certified as individual assets, and then sold to fans and collectors. Blockchain ensures that buyers purchase only authentic digital copies, and that content owners monetize and protect the value of their performance or production. The Minerva platform marries the delivery of live performances with the ability for fans and collectors to buy a certified copy of a “piece of history”.



Conclusion

By utilizing artificial intelligence, virtual reality, and blockchain, Minerva is enabling new innovative services which will fundamentally change the way content is discovered, enjoyed, and shared. Consumers will have a more personalized and engaged access to the content they love, advertisers will receive better value for their money, and service providers will have access to a new world of subscriber monetization opportunities.

Minerva offers best-of-breed service management platforms powering video services for more than 300 operators world-wide serving millions of subscribers.

www.minervanetworks.com

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