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Decentralized Systems for Broadcast, Streaming, and VOD

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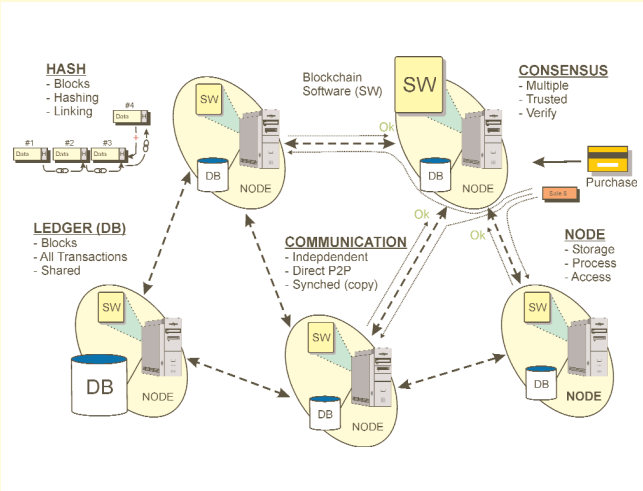

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Editor's Viewpoint

Blockchain media magazine helps Blockchain and Media Professionals to discover and implement decentralized broadcast, streaming, and VOD systems and services. Our content is provided by active expert editors and contributors who have implementation experience in their topic areas. We are dedicated to providing valuable, unbiased, and practical information in many formats to help business leaders, technical experts, managers, and others to save time, implement solutions, and to make better systems and services.

Key Features:

News - important key changes in the industry
Market Updates - statistics, trends, & benchmarks
Articles - education and solution focused articles
Buyers Guides - lists of companies, services, & Blockchains.
Events List - upcoming Blockchain & media trade shows & conferences
Podcast - implementers share successful experiences & tips
Resources - dictionary, white papers, tutorials, templates, & more...

"Blockchain + Media = New Services + Cost Reductions + More Revenues"

Lawrence Harte, Editor

Blockchain Media Expert Writers

What makes a magazine successful is the value of its content. Our expert writers cover Blockchain Media technology and business issues that are critical to the success of decentralized broadcast, streaming and VOD systems and services.

Debbie Hoffman
Blockchain Law

Debbie Hoffman is the Founder and CEO of Symmetry Blockchain Advisors, working with clients in their endeavors related to education, strategy, compliance and implementation of Blockchain solutions. As a attorney with experience in financial services, law and technology innovation, Debbie brings a unique perspective to blockchain innovation. Debbie is an expert editor for Blockchain Dictionary (blockchaindefinitions.com) and co-author of "Blockchain Technology and Business Implementation" Book. She is the founder of Blockchain Technology and Business Orlando Meetup Group and a sought after speaker at conferences and events. Debbie has won numerous awards in her fields of expertise.

Lawrence Harte
Blockchain Business

Lawrence Harte is a Tech Media and business technology expert. He is the senior editor for Blockchain Media Magazine, Host of Blockchain Media Podcast, Editor of Blockchain Dictionary (blockchaindefinitions.com), and co-author of "Blockchain Technology and Business Implementation" book. Lawrence is the co-founder of the Blockchain Technology and Business Meetup Group Orlando and expert consultant for communication companies including Google TV, Samsung, Nokia, and others. Mr. Harte has an executive MBA from Wake Forest University and a BSET from the University of the State of New York.

Akash Takyar
App Development

Akash Takyar a mobile and Blockchain app development, IoT technology, and AI expert. He has developed 100+ digital platforms for leading companies including Siemens, 3M, and others. Akash is the co-founder of LeewayHertz and is a consultant to several fortune 500 companies. He has a Masters Degree in Computer Science from IITM. Akash's app implementation experience allows him to rapidly develop and provide effective Distributed Ledger and App solutions. His ability to explain complex technologies in simple and practical ways has resulted in him becoming a popular speaker at colleges, universities, and conferences.

Drago Bratic
Blockchain Education

Drago Bratic is a blockchain technology and digital marketing expert. He is a day 0 Blockchainer and has been passionate about the technology ever since. After helping his clients with digital marketing by day; he operates Bit Basics by night and seeks to educate the masses as to the enormous potential of blockchain tech. Drago is the founder of the Triangle Blockchain & Business meetup group, one of the largest blockchain meetups in North America, and a popular speaker local events as well as universities and colleges across the United States & Canada.

Market Update

Global Blockchain in Media, Advertising, and Entertainment Market 2018-2023: Market to grow at a CAGR of 81.1% to Reach $1 Billion

Markets and Markets research company forecasts the global blockchain in media, advertising, and entertainment market to grow from USD 51.4 million in 2018 to USD 1,000.1 million by 2023, at a Compound Annual Growth Rate (CAGR) of 81.1% during the forecast period.

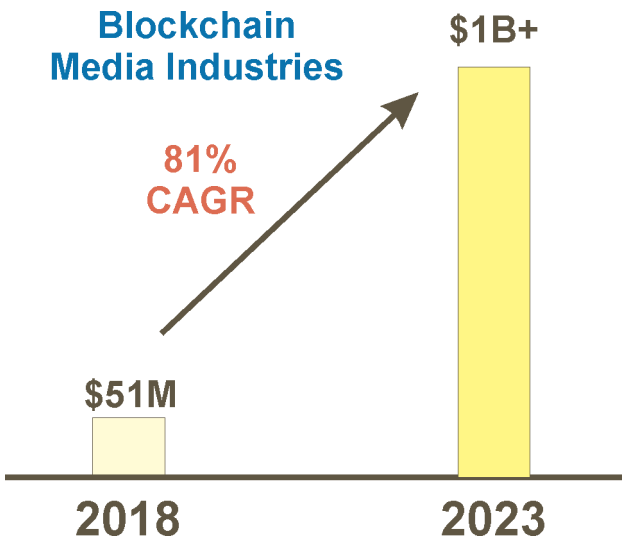

Figure 1, Global Blockchain Media & Advertising 2018-2023
Source: Markets and Markets Research

The rising demand for eliminating intermediaries between content creators and end-users, increasing instances of data piracy in the media, entertainment, and advertising vertical, and the growing need for secure and faster transactions are expected to drive the market.

By providers, the blockchain in media, advertising, and entertainment market has been segmented into application providers, middleware providers, and infrastructure providers. The application providers segment is expected to grow at the highest CAGR during the forecast period. Application providers help media vendors to reduce the costs associated with contractual agreements and distribution of profits, eliminate intermediaries, and decrease manual processes.

Based on applications, the market is segmented into licensing and rights management, digital advertising, smart contracts, content security, online gaming, payments, and others (content distribution and dynamic pricing). The payments application is expected to have the largest market size during the forecast period. The blockchain technology provides real-time payments against assets with an immutable state and digital identity, thereby resulting in 40-80% reduction in transaction costs. The technology helps in automating the payment processing activities, eliminating the need for intermediaries, and reducing the administrative costs and time for the providers and payers.

Among enterprises, the Small and Medium-sized Enterprises (SMEs) segment is expected to grow at a higher CAGR during the forecast period. The increasing demand for the integration of the blockchain technology-powered solutions in the media, entertainment, and advertising vertical is expected to drive the SMEs segment in the market.

North America is expected to have the largest market size in the global blockchain in media, entertainment, and advertising market, while APAC is expected to grow at the highest CAGR during the forecast period. The North American region has witnessed increased investments in the blockchain in media, advertising, and entertainment market. In the region, the blockchain technologies are effectively used in media, entertainment, and advertising vertical for various applications, such as licensing and rights management, digital advertising, smart contracts, content security, online gaming, and payments.

Source: PR Newswire. For additional information or to order the report, contact Research and Markets - https://www.researchandmarkets.com/research/sv6dck/global_blockchain

Blockchain Media News

Comcast Collaborates with Industry Partners on Blockgraph Software to Jumpstart the Use of Secure Data Sharing for Advanced TV Advertising

Newly launched, peer-to-peer platform allows participants to protect and control their data, while benefitting from the shared insights of entire user network

Adoption by media companies will create a secure, privacy-optimized "identity layer" for TV audiences on par with the depth and scale of digital media

December 21, 2018 02:34 PM Eastern Standard Time NEW YORK--(BUSINESS WIRE) - Today, Comcast Cable Advertising, a division of Comcast Corporation (Nasdaq:CMCSA), launched the next phase of Blockgraph, an industry initiative designed to create a secure way to use data and share information. Comcast is now working with other industry partners on this initiative, including Viacom and Spectrum Reach, the advertising sales division of Charter Communications, Inc., in a collaborative effort that will facilitate the secure exchange of privacy-compliant audience insights for addressable advertising. Additional media companies and MVPDs participating will be named shortly.

"Blockgraph is another example of the industry coming together to adopt new standards and technologies that will allow us to compete more effectively as a medium, while simultaneously delivering more value to our advertising clients"

Blockgraph is designed to become the "identity layer" for the TV industry, providing a platform on which media companies and publishers can offer marketers best-in-class data capabilities without disclosing identifiable user data to third parties – adding additional protections to user privacy.

At the core of the initiative is the Blockgraph platform, a blockchain-enabled software, incubated to date within Comcast's FreeWheel group, which allows TV and media companies to control, connect, and safely activate their data at-scale. Comcast developed this software with the end goal of improving the efficiency and effectiveness of data-driven TV marketing and advertising, resulting in better planning, targeting, execution and measurement across screens.

Blockgraph helps solve data activation challenges for all parties within the global TV advertising ecosystem, including sellers of media, buyers of media and, importantly, consumers of media. An inherent characteristic of the platform is consumer privacy, since each Blockgraph participant's data stays in its own systems and the participant continues to protect the data and manage the privacy of its users, including respecting any user choices regarding the use of the data.

"Data is a valuable and sensitive asset for media companies and consumers so understandably, it must be protected," said Jason Manningham, General Manager, Blockgraph. "At the same time, data is now the fuel powering media and advertising. The TV community needs to ensure that we can compete with the data capabilities of digital-first companies. We understand that providing a safe way to protect data while benefitting from collective insights is the path forward. And we believe Blockgraph offers that path."

Today, stitching together data attributes between two parties, such as an advertiser and a media company, generally requires sending data to a centralized third-party provider. This provider does a bi-lateral blind match between the two parties, then sends back non-identifiable data segments that can be used for targeting or measurement. In contrast, Blockgraph is a peer-to-peer platform that allows all participants to perform blind matches directly with one another, secured through encryption technologies, non-identifiable data and blockchain protocols. In addition to greater security and control, Blockgraph allows participants to benefit from shared learnings of the network as additional attributes are matched against encrypted Blockgraph Identifiers.

Comcast is currently working with NBCUniversal to test Blockgraph's capabilities with plans of incorporating it into its addressable offering in early 2019.

Comcast is also in talks with several other potential Blockgraph participants for future rollouts to escalate the initiative's scale and backing. Key among these is Viacom, whose early involvement as a leading partner in providing feedback to help shape the product roadmap and structure of the Blockgraph initiative has been integral in elevating its impact and adoption.

For more information on Blockgraph, or to find out how you can participate, please visit: www.blockgraph.co.

About Comcast Cable Advertising

Comcast Cable Advertising, the advertising arm of Comcast Cable, is dedicated to bringing industry-leading television and video solutions to marketers.

It is comprised of two primary businesses: Comcast Spotlight and FreeWheel. Comcast Spotlight, www.comcastspotlight.com, is the advertising sales division that helps put the power of

cable to use for local, regional and national advertisers. FreeWheel, www.freewheel.tv, offers advertising management solutions for the New TV ecosystem and beyond, enabling its diverse client base — comprised of some of the largest agency, media and entertainment companies — to manage and maximize value from their TV and premium video media. Comcast Cable, along with NBCUniversal and Sky, is part of the Comcast Corporation (Nasdaq:CMCSA). Visit www.comcastcorporation.com for more information.

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Comcast Corporation
Dan Friedman, 917-520-1436
Daniel_Friedman@comcast.com

Blockstream Satellite Enables Bitcoin-Powered Worldwide Data Broadcasts

VICTORIA, BRITISH COLUMBIA (PRWEB) DECEMBER 17, 2018 - Blockstream Satellite, a groundbreaking project that broadcasts the Bitcoin blockchain from space, today revealed all-new interactive services, allowing users to broadcast their own messages via the network. In addition to the announcement, Blockstream Satellite has expanded coverage to the Asia Pacific region, meaning any messages sent via the network will reach almost anyone on the planet.

Previously covering North and South America, Europe, and Africa, the addition of the Asia-Pacific region to Blockstream Satellite brings free access to some of the most populous areas of the world. From the top of a mountain to the middle of a desert, all a user needs to receive broadcasts are clear skies, a computer, and a low-cost satellite TV dish.

"While satellite communications have traditionally been cost-prohibitive, Blockstream Satellite will finally allow developers to adopt satellite communications in their applications," said Chris Cook, head of the Blockstream Satellite project. "The new API will make it possible to send 'Hello World' to the world, but we think developers will come up with something a little more adventurous than that. Natural disaster notifications, secure personal messaging, and sending bitcoin market data to remote locations are just some of the exciting examples of the power of this service."

To cover the costs of sending satellite data, users will be paying for usage via Bitcoin's rapidly-growing Lightning Network. Not only does Lightning allow for per-kilobyte microtransactions, but its "onion-routing" technology allows users to safely protect their identities. Combined with proper encryption, the Blockstream Satellite API allows for totally private broadcasts where neither the sender, nor receiver, nor content of a message is known to Blockstream or any third parties.

"The launch of the Blockstream Satellite API represents the next step in global Bitcoin infrastructure," said Dr. Adam Back, Blockstream CEO. "For the first time, everyone has open access to a broadcast medium completely external to the internet, bringing reliable message transmission and Bitcoin access to the remotest of locations. With the Asia Pacific expansion, Blockstream Satellite users are now able to reach over 90% of the world's population with their messages. All of this is made possible thanks to micropayments enabled by Bitcoin and the Lightning Network."

Users wanting Blockstream Satellite access in the Asia Pacific region can get access now by downloading the latest software from the Blockstream Satellite site. The same software also includes an update required for API access and data broadcast, scheduled to go live in early January 2019.

About Blockstream

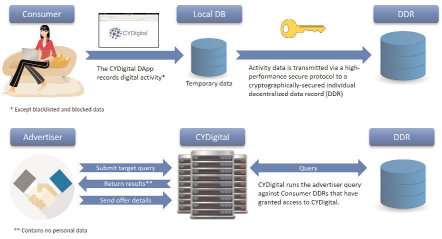
Blockstream is the global leader in Bitcoin and blockchain infrastructure. Blockstream's sidechain technology (Liquid Network) enables faster Bitcoin settlements, while empowering financial institutions to tokenize assets. The Cryptocurrency Data Feed, developed in partnership with Intercontinental Exchange, delivers best-in-class real-time and historical exchange data. Blockstream's GreenAddress is the world's most advanced consumer Bitcoin wallet.

Blockstream was founded in 2014, with offices and team members distributed around the world.

About Blockstream Satellite

Blockstream Satellite broadcasts the Bitcoin blockchain from space, providing everyone in the world the opportunity to use Bitcoin, regardless of their internet connection. Through the Blockstream Satellite API, individuals and businesses are also able to make their own private broadcasts over the satellite network, with data usage paid for in bitcoin via Lightning Network.

For more information, visit: blockstream.com or call Neil Woodfine at +1.778.922.0798.



Filmio Announces Tokenized Entertainment Ecosystem, Leveraging Blockchain to Take Filmmaking into the Future

SAN DIEGO (PRWEB) DECEMBER 06, 2018 - Today Filmio launches its website which outlines its decentralized entertainment platform and ecosystem to democratize the filmmaking, TV, and VR industries.

Filmio believes talented creators should have opportunities, that fans should have a voice, and that investors should have access to better metrics for predicting success. Filmio is leveraging the democratizing power of blockchain technology to meet the needs of all members of the entertainment industry.

Filmio Executive Chairman, Bryan Hertz, said, "We saw a gap in the current entertainment ecosystem when it comes to independent film, VR, and TV. There are plenty of film lovers who want to watch more unique, diverse, and original content, but it's very difficult for indie filmmakers to not only make their films, but to find their audience. We saw an opportunity to create an ecosystem that connects creators to fans and actually incentivizes fan involvement to elevate the best ideas from indie filmmakers whose content isn't getting made in the current system."

Using the tokenizing capabilities enabled by blockchain technology, Filmio rewards fans for evaluating and rating projects early in the creative process. This feedback will be invaluable to filmmakers, and the aggregate of fan ratings and social interactions will be compiled into a one-of-a-kind algorithmic validation metric representing fan opinion. This 'Go Score,' as Filmio calls it, could offer studios, production companies, financiers, and other industry players a solid indication of a film's likelihood of success early on in development. Such a measure of a project's potential resonance among fans has never before been realized in Hollywood.

"Blockchain is the only technology that adequately enables the creation of a peer-to-peer path connecting fans to creators," said Don Richmond, Filmio Chief Marketing Officer who boasts over twenty years of experience working with such notables as HBO, DIRECTV, ESPN, and Showtime. "Our vision is that, by connecting these two groups, the best ideas will gain attention from financiers, investors, and other industry players key to a project's success."

Given the rise of security tokens offering a promising, more disciplined foundation for blockchain applications within the volatile utility-token-only ICO market, Filmio has engineered a best-of-both-worlds solution: a dual-token ecosystem comprised of FILM security tokens and FAN utility tokens. The Filmio Decentralized Platform is being built on EOS for optimal scaling, speed, data storage, and developer support. These efforts are led by Chris J Davis, Filmio's Chief Technical Officer who is a full stack developer with experience building blockchain-based projects and over 20 years of experience in design and engineering.

Given a talented team with knowledge of both the problems in entertainment as well as the capabilities of blockchain technology and tokenization, Filmio is well-suited to build a decentralized solution for the film, TV, and VR industries.

For media inquiries, please contact Jesse Lucas at (310) 260-7901 or Jesse(at)MelrosePR(dot)com.

About Filmio

Filmio is an entertainment platform that aims to democratize the filmmaking, TV, and VR industries. It leverages blockchain technology to be a gamified creative incubator, market validator and distribution launchpad. Creators gain access to key resources, including an evolving algorithm and powerful audience-building tools for their projects. Fans discover projects, and influence the creative process with votes, reviews and promotion. This fan-creator symbiosis grows a meritocratic, self-sustaining ecosystem where the best projects reach fruition.

For more information, contact Jesse Lucas at Melrose PR at +1.310.260.7901.

CYDigital Using

Blockchain to Supplant Search and Social Advertising

BURLINGAME, CALIF. (PRWEB) DECEMBER 04, 2018 - CYDigital, Inc., headquartered in Burlingame, CA, has formally launched in the U.S. with the objective of displacing search and social advertising as the new vehicle to reach specific consumers with specific offers at the time when consumers are most interested: when they are looking online at similar products. CYDigital's solution is a blockchain-based, smart contract-enabled platform that is powered by its CYD token ("CYDT").

Google and Facebook control the vast majority of the U.S. digital advertising market, yet ads are mistimed and mistargeted. These online giants offer consumers little to no protection for their data. They gather it, sell it, and exploit it all without consumer permission, control, or revenue sharing. In the last year, more than 25% of all Facebook users and 44% of those users 18 to 29 have deleted the app from their phones due in large part to privacy concerns.

Through CYDigital, consumers will be able to control and benefit from their online activity while advertisers receive the Holy Grail they've long been seeking – a way to present timely, focused, results-driven ads to consumers who want to receive their promotions.

"For advertisers, CYDigital can supplant search or social advertising because it is a far more targeted means to reach consumers who actually don't mind viewing ads that deliver value. And in the era of privacy invasion, intrusive ads and GDPR-like constraints, CYDigital's timing could not be better," said Joe Rizzo, CEO and co-Founder of CYDigital.

According to research published by the DMA, Acxiom and Future Foundation, 80 percent of consumers believe that personal data is their property and that they should be able to trade it as they see fit.

"We are giving consumers a completely different model, changing advertisements from something that happens to them into something they anticipate and look forward to," said John Rizzo, CTO and co-Founder of CYDigital.

As consumers capture all activities into their "digital picture," they will be able to make their picture available to advertisers, and in the process, benefit in 5 different ways:

Earning CYDT through active program participation;

Sharing in advertising revenue by making themselves available to advertiser's offers;

Earning CYDT by referring friends and family members;

Receiving deeply discounted and unique offers from advertisers;

Apply their CYDT earnings to advertiser offers (think "GroupOn for the blockchain").

In return, advertisers will receive access to highly desired consumers who actually want to see their advertisements, will receive better information about those consumers, and will be able to reach those consumers at the perfect time: when the consumer is looking at competing items.

Led by a seasoned team of technology and marketing experts with a solid track record of tech startups, CYDigital aims to build the platform and drive Consumer adoption to seven million consumers and over 1,000 advertisers during the first 36 months of operation. CYDigital anticipates launching its solution by mid-2019. CYDigital will soon be conducting a private securities offering to accredited investors under Rule 506(c) of Regulation D of the Securities Act of 1933 to raise capital to continue building the CYDigital Platform.

CYDigital and CYDT are trademarks of CYDigital, Inc. in the United States and other countries.

For more information, press only:

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Email: joe(at)cyd(dot)digital

For more information about the Company: https://cyd.digital

Featured Article

Blockchain for Media

By: Lawrence Harte

Blockchain can be used for Movies, TV Shows, Videos, and other media to get funding, track and protect media, and create new ways to generate revenues. The market for global media and entertainment is over $2 trillion+ for movies, television, commercials, streaming media, music, and other forms of publishing [Movie.io] and the United States movie and entertainment industry will reach $804 billion by 2021 [Price Waterhouse Coopers]. Blockchain systems can speed up, provide trust, and add transparency by gathering, validating transactions, and sharing with authorized users. By 2017 there were already dozens of operating blockchains in almost all levels of the media and entertainment industry. Figure 1 shows key levels of the media business and key areas that Blockchain adds speed, efficiency, and trust value.

Movie and TV Show Funding

Movie and TV show funding blockchains can be used to securely share production proposals, process investments, track royalties, and to repay investments on agreed terms. Media funding Blockchains can remove the Hollywood accounting practices that may allocate hidden expenses that could not be verified.

Some of the key media project funding challenges include how to privately approach investors, develop investor trust, and being able to accurately process payments when revenues are earned

Many small independent film productions have used crowdfunding on Indiegogo.com to raise money for their production. When

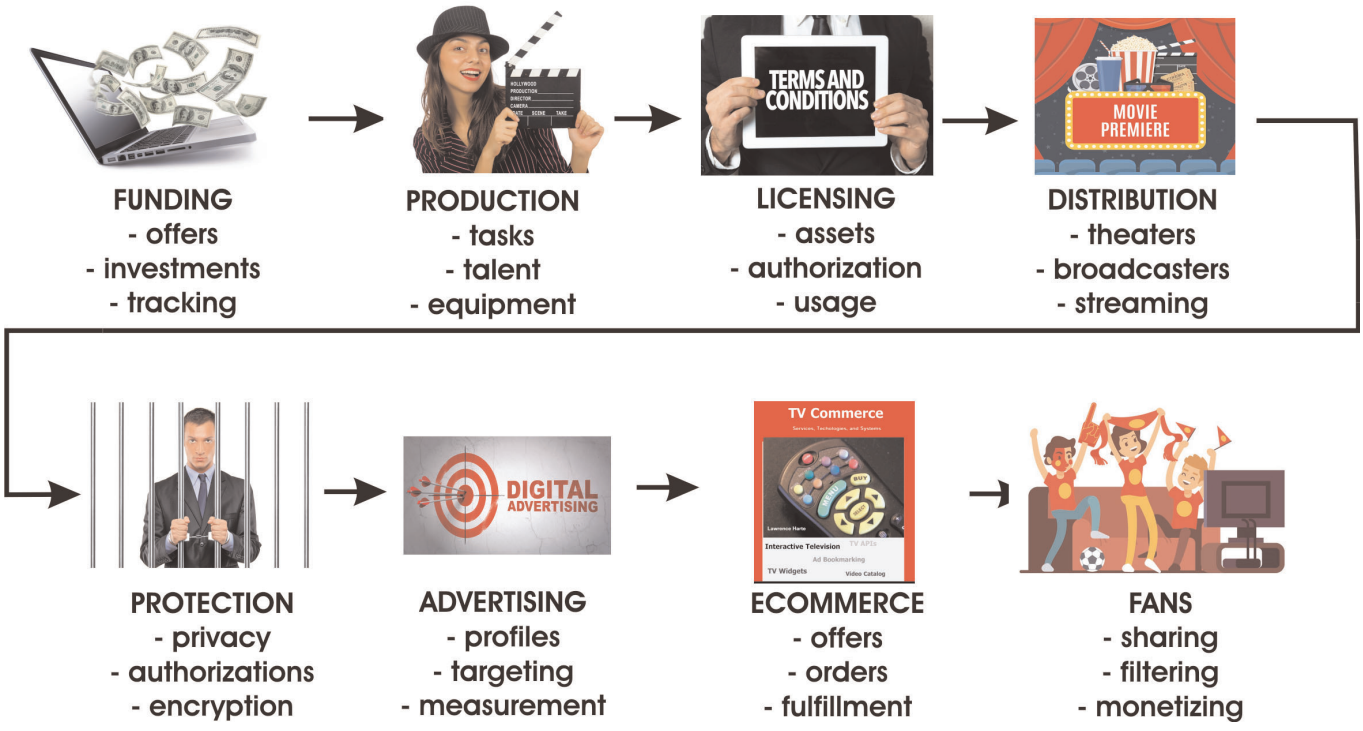

Figure 1, Blockchain Applications for Media

Blockchain Media

Podcast

- ✓ New Blockchains for TV Tech & Business
- ✓ Decentralized Systems
- ✓ Implementation Tips

Podcast Topics:

Blockchain Movie Funding o Movie and Show Production o Decentralized Distribution o Content Protection o Media Licensing o Streaming and VOD o Broadcast and Interactive Advertising o TV Apps o tCommerce o Media Storage o Dapps o Ticket Sales o Social TV o Blockchain Law o Stock Media o BaaS o Blockchain Media Players o Oracles o Remote Workflow o Live OTT o Cloud Video Editing o Distributed Billing o Interactive TV o Second Screen o Broadcast VR o Royalties o Special Effects o Certifications **and MORE....**

Podcast Steps

Session Description
Agree on Questions
Guest Bio & Photo
Audio Interview
Audio Edit
Review/Approve
Publish Audio
Media Convert (50+)
Publish Media Posts
(over 12 months)

Media Conversion:

In addition to creating an audio program, each audio session is transcribed and converted into 50+ videos, slides, images, article(s), blog posts, Tweets, and other media formats. These posts are scheduled for release over 12 months keeping the podcast session up front in the media.

Tweets - Podcast media announcements, innovations, and tips.
Blog Posts - Some questions and answers are converted into blog posts which are published on Internet TV Plus and other blogs.
Article(s) - The interview is converted into one or more articles that are published on Blockchain Media, IPTV Magazine or Social TV Magazine.
Slides - Powerpoint slides are created from interview content and related images are inserted. Which are published on Slideshare and on separate web pages (each page is indexed by search engines.)
Videos - Slide images are combined with audio to create a video version of the podcast which are published to our Youtube channel. Some interview sections or question topics may be converted to separate videos.
Images - Slide images are uploaded to Internet TV Plus and other image sharing sites (such as Pinterest.)

BlockchainMediaMag.com/Podcast

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investors contribute money to these productions, they may never see benefits or royalties. Crowdfunding Blockchains add a level of trust to ensure the crowdfunding contributions are used as stated and will deliver the rewards promised. Indiegogo.com has setup Kowala - ico.indiegogo.com Blockchain funding.

Cryptographic tokens can be issued to raise capital that can be used for entertainment projects such as movies, TV shows, video series, and others. Tokens represent an ownership interest in the projects so investors can trust that the project managers and distributors are not able to modify accounting records or insert expenses that were not authorized by the investors. This film and media project transparency allows some or all investors to see expenses, receipts, entitlements, and ownership of each project.

Key ways that Blockchain can assist in movie and show finance include investment gathering, payment gateways, smart contracts, accounting, partnerships, portfolios, copyright management, and communication tools.

Movie and TV Show Funding Blockchains

Movie Coin - movie.io
Filmio - film.io
X Motion Pictures - xmotionpictures.io

Movie and Media Production

Movie and TV show production Blockchains can be used to acquire, assign, organize, protect, control access, and track production talent, crews, equipment, and other activities that are needed to plan, produce, and publish movies and TV shows.

Some of the challenges for media production that can be improved by Blockchain include content and rights management, talent acquisition and payment, rental of production equipment and services, secure production collaboration, and access to advanced video processing and artificial intelligence services.

While there are end to end production Blockchains (from concept to ticket and fan merchandise sales) like ephelants360, there are blockchains that specialize in key parts of the video and media production process such as dbrain.io (video AI), rendertoken.com (graphics rendering), and others.

Movie and Media Production Blockchains

Verasity - verasity.io
ephelants360 - ephelants360.io

Media Licensing

Media licensing Blockchains identify content assets (video, audio, digital), process and manage usage authorizations, gather and track usage fees. Blockchains for media offer options to media owners and creators who want to earn money selling rights to their digital works. Blockchains can also help distributors and publishers to overcome challenges of complicated distribution arrangements and high middleman fees.

Media licensing challenges that can be solved or helped by Blockchains include content identification (codes and descriptive metadata), license fee and use negotiations, clearance requirements and documentation, and usage provisioning and enforcement.

Media Licensing Blockchains

Tune Token - tunetoken.io
Muvi - muvi.com
Photochain - Photochain.io
Singular DTV - content owner platform - singulardtv.com

Movie and Video Distribution

Movie and video distribution Blockchains manage the ordering, transfer, and usage of movies to publishers, streaming services, stored media (DVD and Blu-Ray), distributors, and theaters.

Key challenges that Blockchain can help with for movie and media distribution include validating users and their authorizations, keeping distribution delivery secure (such as to movie theaters and broadcasters), and authorizing viewing sessions.

Movie and Show Distribution Blockchains

Movies Chain - TVzavr - movieschain.io
Play 2 Live - play2live.io
Slate - Slate.io

Content Protection

Content protection Blockchains add and/or use identification information (watermark and/or fingerprinting), monitoring streaming (broadcast, OTT) or stored media (DVD, flash drives), manage access control, and protect media from unauthorized uses.

Some of the key content protection challenges Blockchains can help with include making content easy to copy for authorized users, blocking unauthorized content viewing, allowing all publishers to have access and cost effectively use sophisticated DRM systems, and to divide long content media (such as TV shows) into multiple rights usage opportunities.

Content Protection Blockchains

DACC - dacc.co
Wemark - wemark.com
Goldilock - goldilock.com
NPER - nper.io

Advertising

Advertising Blockchains protect viewer privacy, gather viewing information, enable precise ad targeting, and provide detailed viewing and engagement information to advertisers.

Company advertising budgets are shifting toward Internet Advertising. According to Zenith Media research, global advertising spending was $579 billion in 2018 with 39% ($226 billion) spent on Internet advertising (display, classified, paid search). Advertising Blockchains can help broadcasters and publishers to capture (or recover) advertising spending for broadcast services by providing precise ad targeting and viewer metrics that are as good or better than Internet advertising systems. Viewer's privacy is protected using the Blockchain while enabling the gathering of viewer activity information (viewing and purchase histories - on and off network). Ads can be targeted and delivery with the detailed viewing metrics provided back to the advertiser.

Advertising Blockchains

Adbitmedia - adbitmedia.io
Adex - adex.network
Kochava - kochava.com

eCommerce

eCommerce Blockchains insert product and service offers, processing transactions, and pay sales commissions. Tying eCommerce to media systems such as Television commerce (tCommerce) can provide massive new revenue sources. Consider that the off screen revenue from the Star Wars films (licensing, product sales, etc) was approximately 10x the revenue earned from theaters.

Blockchains can be used to provide content owners, distributors, and service provides with new revenue types such as dynamic product placement, affiliate commissions, and direct product sales.

eCommerce and Affiliate Blockchains

Elementh - elementh.io
Affiliate Coin - affiliatecoin.io
Reftoken - reftoken.io

Fan Social Management

Fan social management Blockchains classify, validate, organize, filter, and monetize content between fans, broadcasters, and content owners.

Social TV is becoming an important part of fan engagement both on screen and off screen. Social media Blockchains can be used to moderate and filter bad content (fake, harmful) and reward good content (rewards tokens).

Fan Social Blockchains

Fans Unite - fansunite.io
Social Media - steem.io
Rewards Tokens - rewardstokens.io
Patron - patron-ico.io

Featured Article

Blockchain Technology

By: Akash Takyar

Blockchain is a chain of data blocks, containing time-stamped digital records. Initially described by a group of researchers in 1991, this technique was intended to timestamp digital records so that no one could backdate or tamper them. The Blockchain concept went unused until Satoshi Nakamoto revived it again in 2009 to create a digital cryptocurrency, Bitcoin.

A Blockchain is a set of technologies and processes (protocols) that allow a master database of all transactions (ledger) to be stored, processed, and updated by all members (nodes) where communication can be independently coordinated between nodes (peer to peer - P2P) and all transaction data is verified by multiple trusted members or processors using an agreed (consensus) algorithm which can be added and linked to other blocks in database (hash cryptography) .

Figure 1 shows that a Blockchain Contains Ledgers (Databases), Nodes (Processing), Direct P2P Communication (Internet), Consensus Process (Majority Approval), and Hash Cryptography (Irreversible Security). In this example, a data transaction is submitted to multiple nodes for validation. When a majority approval consensus is achieved, it is added to the ledger database in a new block which is linked by a hashcode to the previous block. This new block is copied (synchronized) to all the databases at the other nodes.

Distributed Ledger Technology (DLT)

A blockchain contains a database (ledger) which holds all the transactions that are part of that Blockchain. The ledger is a master database that holds all the transactions in the Blockchain and each processing node maintains a full copy of the database. The full database is made accessible to all nodes in the Blockchain.

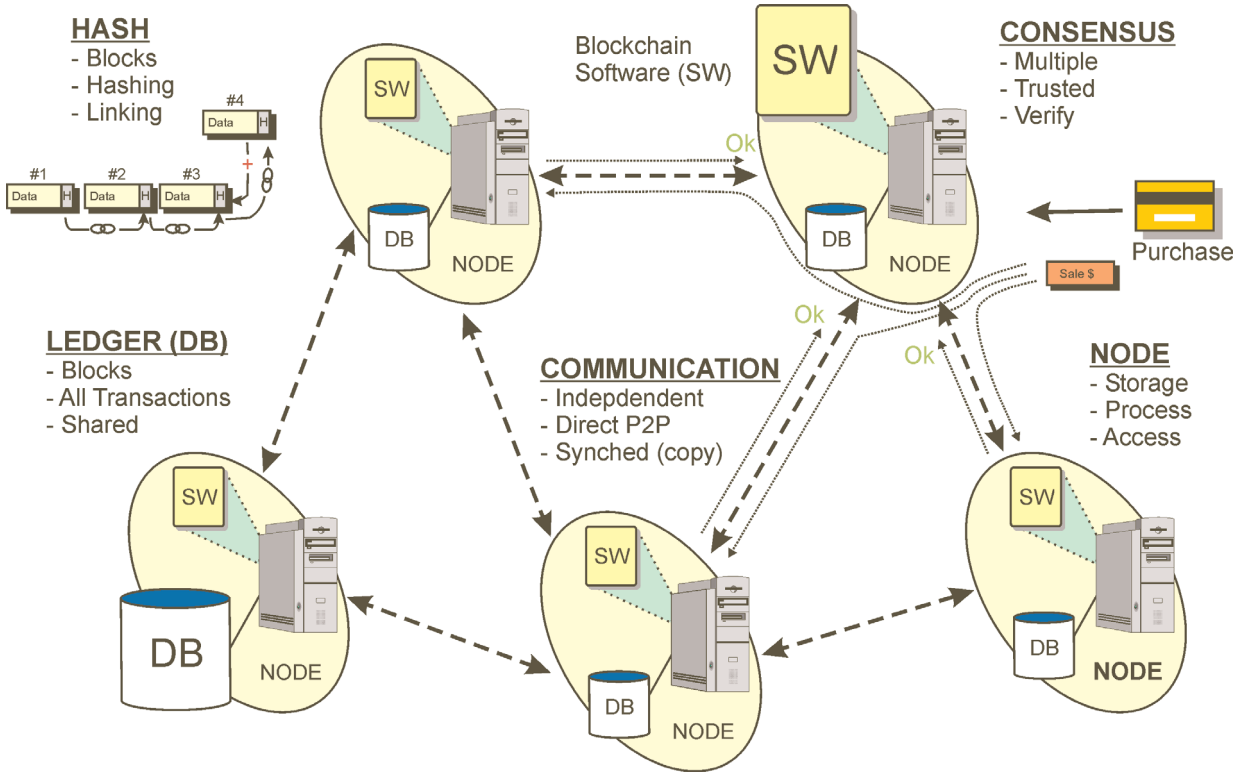

Figure 1., Blockchain System

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Nodes

Blockchain nodes are computers that maintain an updated copy of the ledger (transaction database). Some nodes have ledger mining capabilities to find, validate, and create new blocks that can be added to the Blockchain database (ledger).

Peer to Peer Communication (P2P)

Blockchain communication is independent direct peer to peer (P2P) which allows each node to discover and synchronize its ledger information with other nodes. All nodes do not need to be connected all the time. When nodes are connected or reconnect, they must gather (synchronize) with other nodes to get the latest blocks to be able to process new transactions.

Consensus Protocol

Consensus protocols are used to gather, validate, and distribute (add) transactions to the participating nodes. The consensus protocol is managed by software that is stored in each node. To change the consensus software program (transaction validation rules), a majority of nodes must agree. If a change is agreed by a majority, the consensus protocols on all nodes is updated. However, it will result in creating a new branch or fork of a new Blockchain.

Hash Cryptography

To protect data in a Blockchain ledger, each block of data is linked to the previous block using a Hash code (fingerprint). Because each block in the Blockchain is linked to the previous block and nodes in the Blockchain have copies of all transactions, change of data on any block will result in change of the calculated hash and eventually invalidate the hash code.

The data recorded in a block depends on the blockchain type. It can be coin value (such as Bitcoin wallet value) or it can be measurement or transaction data (such as data from a Smart contract).

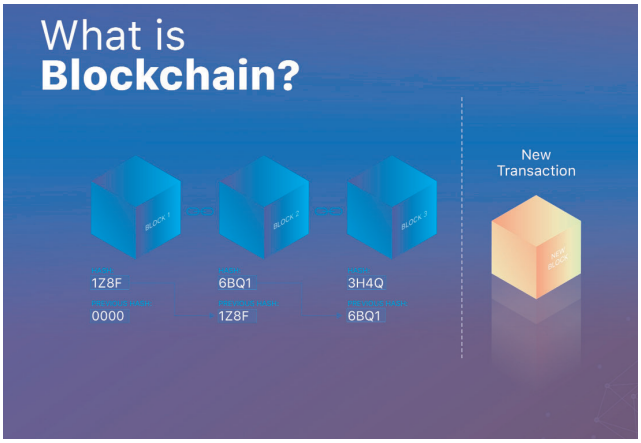

Figure 2., Blockchain Hash Code Linking
Source: LeewayHertz

Types of Blockchains

There are three types of blockchains; public, private, and permissioned.

Public Blockchain

A public blockchain allows any user to become a member of the blockchain network. Since the data stored on blockchain is accessible to everyone in the world, anyone can have the right to read and write data. A public blockchain is completely decentralized as the permissions to write and read data are shared by all involved nodes equally who reach consensus before data gets stored on the blockchain.

Private Blockchain

For a private blockchain, only the owner of the Blockchain can control the permissions to send, write and receive data. Private blockchains can only have a few users who are allowed to access and perform transactions on the blockchain network. Only, the organization that has all controls can change the rules of the private blockchain and cancel transactions based on the deployed regulations.

Permissioned Blockchain

A permissioned Blockchain (also called a consortium Blockchain) can be a hybrid model between highly-trusted entity model of private blockchains and the low trust offered by public blockchain. Rather than enabling any user to participate in the validation of the transaction process but in a consortium blockchain, a few selected participants are predetermined.

Featured Article

Introduction to Blockchain Law

By: Debbie Hoffman

Using Blockchain technology to enhance efficiencies in the legal process can add significant business advantages. Like all new technologies, it can also result in new legal benefits and challenges. Using Blockchain technology can drastically enhance the current processes in routine legal work – from being able to add transparency into the litigation and discovery processes as well as have more efficient methods for regulatory compliance. Therefore it is critical for business leaders and legal professionals to understand how Blockchain works and how they can incorporate it into some of their processes.

What Laws Apply to Blockchain?

While there are no specific laws related to blockchain, the law that relates is specific to the industry in which the technology is being implemented. Understanding what laws apply to specific industries and how they will be impacted as the technology develops is the only way the law will evolve to address new developments. As an example, when you work with crypto currency exchanges, it is critical to have a depth of understanding of what licenses are needed. When you have a client investing in a company that integrates Blockchain in its processes, you want to make sure that you are addressing the traditional law related to fund formation and private placements. If you are working with a client building a new Blockchain platform, you need to have proper intellectual property rights protections. Of course, in all areas related to blockchain endeavors, you have an overarching need to make sure you cover privacy laws as well as have an understanding around cyber breach protections. Other laws that apply include taxes, securities, corporate, M&A

Who Needs to Know About Laws Related to Blockchain?

Laws and regulations that apply to blockchain encompasses a variety of forms – from historical law that is molded to fit a new technology, to emerging guidance from the regulatory agencies and ultimately to case law or common law. It is also critical to understand the laws pertaining to the industry to the action that is being taken. For example, if someone is in a business using cryptocurrency, money transmitter laws are important. If a venture fund is looking to invest in a company that is utilizing blockchain, laws related to funds are important.

How will Blockchain Impact Litigation?

There will be a significant reduction in traditional litigation involving disputes and a plethora of new conflicts. Some of these may include the following:

- Intellectual property rights and royalties regarding who has fully paid up licenses and to the extent of such ownership.
- Real estate and property records ownership and history, as well as the title insurance related to such ownership.
- Product provenance and supply chain ultimately authenticating the source of the products including food and pharmaceuticals.
- Chain of custody authenticating ownership and helping to eliminate counterfeit products being surreptitiously entered into the supply chain such as in artwork and diamonds.
- Fraud related to records such as payment and clearance for settlement purposes.

Identity and authenticity of signatures by use of multi-factor authentication verifying identity, and stored on a blockchain, there result will be substantially fewer challenges about fraud, misrepresentation, latest versions, etc. This can trickle down to many areas, but once, for instance, is in estate related litigation related to wills and trusts.

Legal filing related to data entry and ledger-like such as filings associated with the Uniform Commercial Code.

How does Blockchain Relate to Evidence and Discovery?

Data stored on a blockchain is there in perpetuity, with a perfect, time-stamped audit trail of information related to and the history of transactions at issue. While it resolves many issues pertaining to the requirements to preserve evidence, it does present some other challenges, which will require further review and rulemaking.

Depending on what kind of data is stored on the chain, releasing access to data stored on the chain might also expose protected information, private data, and could expose a party to liability. Businesses will need to consider their on-chain vs. off-chain storage options and really evaluate the need for permanence and immutability.

With data on the blockchain in an encrypted format, it can result in more challenges in searching the data for responsive materials related to subpoenas.

Storing data beyond a records retention policy can create an abundance of data, resulting in additional costs related to the increased storage.

Smart contracts are written in programming code and therefore may creates a challenge in discovery where it is critical that the contract language is carefully analyzed in its entirety. Such analyzation would require independent experts hired to evaluate the source code and transfer it into plain language.

On a positive side, if litigating parties were required to provide discovery on a blockchain, then it would be difficult to withhold evidence or bury critical evidence in a myriad of distracting papers. However, the question is the value-add. Many of these functions can already be securely supplied in a secure data room, providing read and write access, as required, to each party, while not permitting the ability to erase.

Will Blockchain Result in New Things to Litigate?

You can expect there will be new things to litigate including:

- Errors in entering of data;
- Recover of assets stolen from exchanges and/or wallets;
- Accuracy and quality of programming code;
- Complete failure of blockchain due to cyber controls/security;
- Injunctions to stop, for instance, the execution of smart contracts or perhaps to ensure the privacy of data stored;
- Storage issues related to items off-chain; and
- Jurisdictional questions - particularly related to blockchain-stored or shared data.

Ways that Blockchain Can Reduce Litigation Costs

There are several ways Blockchain can reduce litigation costs including reduced discovery time and quick verification of documents and chain of custody.

Cost savings starts with the ability to discovery, identify, and obtain documents which are part of a Blockchain. Right now we spend a tremendous amount of time in discovery and not only with authentication of documents, but also chain of custody. And it's much easier to find discoverable documents and information should they be stored on the Blockchain. So ideally it's used as a storage and transfer system in place of what we use today. If we don't have word and excel and all these different platforms - if instead of the old the underlying technology it is a Blockchain based technology - that could create tremendous efficiencies. You won't have copies of documents; you'll have originals. You'll know who touched those. You'll know the time and date stamp; it will all be there. It could really transform the discovery process as we know it today.

What are Some Ways Costs May Go Up For Blockchain Litigation?

There may be more lawsuits related to the ambiguity of developed law as the new technology is utilized. There will be many ventures pushing the line – and we've already seen this in the emergence of ICOs. A whole host of the shady ICOs have been subject to litigation This includes class action suits.

The other cost is simply the education and training of legal professionals so that they are familiar enough with the legal challenges posed by business who have implemented and are using the new technology. Sadly, many litigators do not yet seem to understand that blockchain technology is separate and distinct from bitcoin and cryptocurrency. They may be in for a surprise when their opposing counsel and client is using blockchain in a way which makes their process efficient and transparent to the point where they just can't keep up because they haven't made the investment.

Buyers Guide

Blockchain Research Companies

Blockchain research companies gather, analyze, and present measurements and trends information that help companies to discover opportunities and optimize implementations for their product and services.

This is a list of the research companies that perform research and produce reports. Many of these reports are sold through research distributors including researchandmarkets.com and marketresearchfuture.com.

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The Blockchain Research Institute is a Toronto-based think-tank that helps organizations to realize the new promise of the digital economy by researching the strategic implications of blockchain technology and producing practical insights that will guide its members in achieving success. The Institute's global team of experts is dedicated to exploring, understanding, documenting and informing leaders about blockchain strategies, market opportunities, and implementation challenges.

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Event Schedule

Trade Show Name	Event Start Date	Event End Date	Event City	Website
World Blockchain Summit Ryiadh 2018	12/5/18	12/6/18	Ryiadh, Saudi Arabia	riyadh.worldblockchainsummit.com
Future TV Advertising Forum 2018	12/5/18	12/6/18	London, UK	10times.com/future-tv-advertising-forum
International Blockchain Technology Conference - IBTC 2019	1/5/19	1/7/19	Sanya, China	engii.org/conference/IBTC2019/
World Blockchain Summit Taiwan	1/17/19	1/18/19	Taipai, Tiwan	taiwan.worldblockchainsummit.com
The Blockchain Event East 2019	1/30/19	2/1/19	Ft Lauderdale, Florida, USA	theblockchainevent.com/east
Broadband Video Expo 2019	2/26/19	2/28/19	London, UK	bvexpo.com
World Blockchain Summit Kuala Lumpur 2019	2/27/19	2/28/19	Kuala Lumpur	dubai.worldblockchainsummit.com
Blockchain Africa Conference 2019	3/6/19	3/6/19	Cape Town, South Africa	blockchainafrica.co/blockchain-africa-conference-cape-town/
CCBN 2019	3/21/19	3/23/19	Beijing, China	ccbn.cn/channels/4.html
World Blockchain Summit Nairobi 2019	3/21/19	3/22/19	Nairobi, Kenya	dubai.worldblockchainsummit.com
Connected TV World Summit 2019	3/27/19	3/28/19	London, UK	connectedtvsummit.com
NAB 2019	4/6/19	4/11/19	Las Vegas, NV	nabshow.com
World Blockchain Summit Taipei 2019	4/25/19	4/26/19	Taipai, Tiwan	dubai.worldblockchainsummit.com
Blockchain Expo Global 2019	4/25/19	4/26/18	London, UK	blockchain-expo.com/global/
Broadband & TV Connect Asia 2019	5/7/19	5/8/19	Bangkok	tmt.knect365.com/broadband-tv-connect-asia/
Malta Blockchain Summit Spring 2019	5/23/19	5/24/19	Msida, Malta	maltablockchainsummit.com/
Blockchain Expo Europe	6/19/19	6/20/19	Amsterdam, Netherlands	blockchain-expo.com/europe/
IBC 2019	9/12/19	9/17/19	Amsterdam, The Neterlands	show.ibc.org
Malta Blockchain Summit Winter 2019	11/7/19	11/8/19	Msida, Malta	maltablockchainsummit.com/
Blockchain Technology Conference 2019	11/11/19	11/13/18	Berlin, Germany	blockchainconf.net
Blockchain Expo North America 2019	11/13/19	11/14/19	Santa Clara, CA USA	blockchain-expo.com/northamerica/

If you know of an event that may be helpful to the readers of Blockchain Media Magazine, please send details to: editorial@BlockchainMediaMag.com or call us at +1.919.301.0109

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The Blockchain Event	TheBlockchainEvent.com	4

Editorial Calendar

Month Deadline/ Submission	Special Editorial Focus	Featured Articles	Buyers Guide	Trade Show Participation
December 18 11/18/18 11/25/18	**Blockchain Marketplace**	Blockchain Technology Blockchain for Media Blockchain and the Law	**Blockchain Research Companies**	Future TV Advertising Forum
January 19 12/19/18 1/5/19	**New Media Funding**	Blockchain Media Funding App Development Smart Contracts	**Media Funding Blockchains**	The Blockchain Event
February 19 1/26/19 2/4/19	**Blockchain Education**	Blockchain Education Options Blockchain University Programs Blockchain Certifications	**Blockchain Certification Programs**	
March 19 2/26/19 3/3/19	**Blockchain Media Players**	Blockchain Media Players Hybrid Blockchains Media Player Economics	**Media Player Blockchains**	Blockchain Africa CCBN
April 19 3/25/19 4/2/19	**Decentralized Media Distribution**	Decentralized Media Distribution Blockchain Integration Content Localization	**Broadcast Blockchains**	NAB Blockchain Expo Global
May 19 4/24/19 5/1/19	**Content Protection**	Blockchain Content Protection Blockchain Access Devices Decentralized Usage Rights	**Content Protection Blockchains**	Broadband & TV Connect Asia
June 19 5/23/19 5/30/19	**Distributed Content Licensing**	Distributed Content Licensing Blockchain Royalty Processing Decentralized Royalty Management	**Content Licensing Blockchains**	Blockchain Expo Europe
July 19 6/23/19 6/30/19	**Movie Distribution**	Blockchain Movie Distribution Billing Gateways Distributed Ticket Sales	**Movie Blockchains**	
August 19 7/21/19 7/28/19	**Distributed Streaming**	Distributed Streaming Systems Blockchain Stream Management Streaming Fee Allocation	**Media Streaming Blockchains**	
September 19 8/19/19 8/25/19	**Blockchain TV Advertising**	Blockchain TV Advertising Blockchain Oracles Video Ad Networks	**TV Advertising Blockchains**	IBC
October 19 9/19/19 9/26/19	**Blockchain tCommerce**	Distribution Television Commerce Affiliate Blockchain Blockchain CRM	**Affiliate Blockchains**	
November 19 10/19/19 10/25/19	**Social TV**	Blockchain Social TV Social Consensus Distributed Fan Management	**Social Media Blockchains**	

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