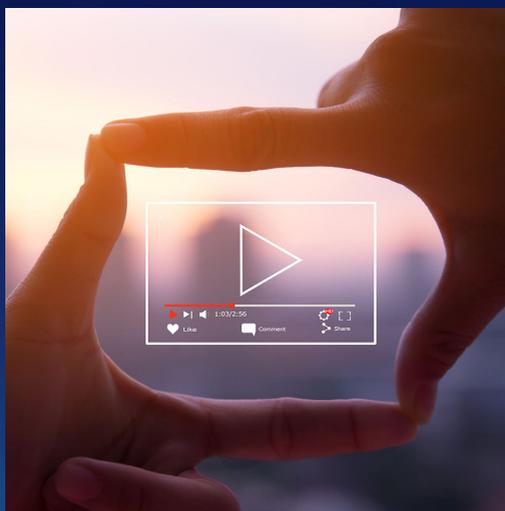


# THE ASIA **VIDEO** **INDUSTRY** REPORT



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# 2022

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## ABOUT AVIA

The Asia Video Industry Association (AVIA) is the trade association for the video industry and ecosystem in Asia-Pacific. It serves to make the video industry stronger and healthier through promoting the common interests of its members. AVIA is the interlocutor for the industry with governments across the region, leads the fight against video piracy through its Coalition Against Piracy (CAP) and provides insight into the video industry through reports and conferences aimed to support a vibrant video industry.



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Please note that data and contributions provided by third parties have been generated independently and represent their own views.

# AVIA IS

## POLICY

THE VOICE OF THE  
INDUSTRY WITH  
GOVERNMENTS  
AND REGULATORS

## PIRACY

DEDICATED TO  
FIGHTING AND  
REDUCING VIDEO  
PIRACY

## INSIGHT

COMMITTED  
TO PROVIDING  
INSIGHT THROUGH  
ENGAGEMENT

The Asia Video Industry Association (AVIA) exists to make the industry stronger and healthier and thus create a better business environment for its members.

# FOREWORD

Welcome to the Asia Video Industry Report 2022. This report that we publish on an annual basis, is designed to give you an update on the issues that we are facing in the video industry, as well as research, data and perspectives from our members. The value that we bring as an industry association comes from the strength and involvement of our member companies and so thank you to everyone who's contributed to this report.

I think it's always helpful to reiterate what AVIA is here to do. We have a diverse and evolving membership that covers the entire spectrum of what we like to call the **premium video ecosystem**. That word 'premium' is important because we are an industry that takes great pride and makes great investments in creating the best programming available. Whether that programming is made available through linear television or through on-demand streaming matters less than the fact that we want governments to understand the evolution and challenges our industry faces, we want to prevent others from stealing and then monetizing our intellectual property, and we want to find ways in which we can together build a stronger, healthier, and more sustainable industry for all of us.

One of the unique things about our Association is the fact that we are purely Asian in focus but representative of the entire industry that operates

in Asia, including domestic, regional and international companies. And these companies are content creators, producers, aggregators and distributors, as well as the companies that facilitate the distribution of content, help monetize the content, improve the user experience of the content and companies that provide advice and intelligence to our industry.

By and large we don't believe that there is a need for complex regulation for our industry. The media landscape has changed so dramatically over the last 20 years that in many countries we are left with broadcasting acts which don't seem particularly suited for the age in which we are living. We certainly don't believe that when it comes to streaming services we should be looking to existing broadcast legislation for guidance. We believe in the power of the market and the power of competition. Regulation tends to get in the way of those things. So content quotas, strict censorship, onerous licensing obligations, are not things that we want to be a part of doing business. We are already a rules-based ecosystem that invests in the markets in which we operate, that follows local laws and so when you look at the traffic that flows through the Internet amongst the cacophony of content, we constitute one neat and orderly, well managed, avenue.

And it is into that tangle of unregulated Internet traffic that we all too often see our

content being stolen, misappropriated and monetized by bad actors. This is clearly an area where we do see the need for better and smarter regulations. As we all live more and more of our lives online, we need to see there, a much stronger focus on replicating the respect for societal norms and protection of property that we take for granted in the physical world. We are seeing real progress on this front with more effective site blocking in a number of countries, a greater awareness of the issues among government, updating of copyright acts, but the problems persist and in these Covid times, as we see theatrical holdbacks shortened and eliminated, more content is being able to be pirated from the moment it is released. Technology continues to be both our friend and our enemy as we see apps and certain social media services fueling content theft.

Finally, as an industry association, it is critical that we have a role to play in bringing industry together. That has been made harder by the times that we are

living through, but we continue to provide and make connections where we can, and this is evident in the committee work that we do as well as in the summits, seminars, webinars and conferences that we hold, and even in these Covid times, we have been able to facilitate a number of physical gatherings connected to those events. The work that we have been doing with the Premium Video Advertising Committee is particularly important because we want to ensure that advertisers understand the opportunities that premium content presents and how it differs from social media and user generated content. But the AVOD space is fragmented and there is much work to be done, both in educating advertisers but also in formulating common industry standards so that we can grow the premium sector.

We hope that you find the Asia Video Industry Report an illuminating and multifaceted account of the developments in our industry as we enter 2022. ■



by **Louis Boswell**  
Chief Executive Officer, AVIA



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POLICY



# POLICY

Hard to believe that a year ago, as we wrote the policy contribution for the Asia Video Industry Report 2021, we faced exactly the same challenges that we still face today. The entertainment world has been on lockdown, with the annus horribilis that is 2020, having curtailed all industry interaction and suspended content production. However, some things do change, in particular the leadership of the policy team and I am delighted, and slightly awed, to take over the mantle from John Medeiros who has retired. Leaders who have led teams for long periods of time all have one thing in common. They have had to face adversity at some point and guide the organization through challenging waters. John has done that for the past 16 years with all the resilience, focus, character and dedication that the role demands. His service to the Asian video industry is simply unparalleled!

In policy terms, however, a year on and little seems to have changed other than trying to find more innovative ways to engage with both members and regulators! Over the past 12 months despite the continuing restrictions on travel brought about by Covid-19, the policy team has been kept busy across the region, on a variety of issues. Whilst regulators have equally been busy adapting to the new ways of working, the pace of change across the industry has barely slowed. Regulators continue to focus on policies that aim to control the Online Curated Content (OCC) industry

as well as looking at ways to tap into the financial benefits reaped by online providers as content consumption continues to surge.

## VIETNAM

Although a year has passed since we last produced this book, some things on the regulatory front in Vietnam remain unchanged. The Ministry of Information and Communication (MIC) in Vietnam continues to attempt to update Decree 6, so as to permit MIC to regulate OCC in the same way as linear television. Several rounds of drafts have sought to impose obligations around licensing, local office establishment and pre-censorship. Alongside these proposed changes, the Ministry of Culture, Sports and Tourism (MCST) has also been reviewing the Cinema Law which potentially would have a read-across to censorship of films disseminated over the internet. The pre-censorship debate within Decree 6 has recently been moved to the purview of the MCST as part of its ongoing Cinema Law review but, as at the time of writing, the retention, within Decree 6, of the licensing and local office establishment requirements, as well as the legacy restrictions placed on foreign television channels around editing, translation and advertising insertion, continue to be a challenge. AVIA has continued to advocate energetically, writing a number of submissions and letters to a variety

of Ministers and Departments. We will continue to do so, drawing on international best practice to encourage an approach that will deliver government aims for an industry that is modern, in line with international best practice trends and meets digital transformational needs.

## INDIA

India is another market where we continue to see a big focus on efforts to introduce more controls on the industry, though such moves have been rationalised by policy-makers as creating a level playing field for all segments of the media and encouraging self-regulation. With sweeping changes introduced in the form of Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, the Cable Television Networks (Amendment) Rules, the guidelines for social media and online influencers and advertisers, let alone discussions about private participation within the space sector and the proposed new Draft Spacecom Policy, AVIA has been kept busy making submissions and engaging with regulators to try and ensure that members' views continue to be taken into account. In particular, we raised concerns about introducing onerous requirements and multiple approvals' processes which make it challenging to do business in India; lack of clarity on issues such as the setting up of self-regulating bodies; and whether legacy television regulation is appropriate to adopt for OCC platforms. The continued legal tussle that the broadcasters in India are engaged in vis-à-vis the telecommunications regulator's (TRA's) New Tariff Order (NTO 2.0) and its proposals, amongst others, to

cap the prices of a la carte TV channels and impose restrictions on bouquet formation, has constantly been on AVIA's radar as we strive to champion light-touch regulation. Looking forward, speculation about a super media law encompassing print, TV, online and cinema businesses could become an opportunity for AVIA to engage pro-actively with legislators. As a new leadership within both the Ministry of Information and Broadcasting and TRAI take the reins, we look forward to forging close working relationships between government and industry.

## INDONESIA

Without the ability to travel to engage with regulators and build relationships, AVIA has, like everyone else, been compelled to rely on the virtual connection. In April we hosted a 2-day roundtable in conjunction with the Indonesian Institute for Policy Research and Advocacy (ELSAM) to focus on local content regulation, e-commerce and the tension with existing regulations. Lively discussions, with a range of speakers from Indonesia, highlighted the differences between OCC and OTT content, as well as the challenges brought about by more online content from a variety of sources, not all of which were captured under existing regulations.

## THAILAND

Direct one-to-one engagement with regulators has also been one of our priorities this year and will continue to be in 2022. With all of the ongoing discussions around OCC regulation, it is important for us to continue to promote AVIA's

Governance Framework, a key facet of which is self-regulation and a need for an ongoing dialogue between regulators and service providers, to emphasise the difference between linear TV and OCC. One of the key meetings we attended was with Thailand's National Broadcasting Telecommunications Commission (NBTC). AVIA was invited to give a presentation and discussion around Thailand's OTT regulations. NBTC focused the discussion on local content quotas, raising concerns that without local content quotas there was nothing to encourage the international industry to procure and show Thai content and therefore the local industry would not benefit or grow. We made the point that actually there was growing demand from local audiences, keen to see content they could relate to, alongside international content, and given OCC providers were very consumer-focused, this would naturally stimulate more spending and investment in producing the demanded content. Our preference would always be for regulators to actively encourage and even facilitate local partnerships, collaboration and development of local talent without inserting unwieldy barriers or creating artificial hurdles which serve to discourage investment. A further point of discussion was around the need to keep regulatory barriers to entry low. We highlighted that if the NBTC did want to introduce licensing then following a system of automatic registration would be preferable. We agreed it would be useful to arrange further meetings with the NBTC, once their membership was finalised, along with content providers to have a wider discussion on specific points.

## PAKISTAN

A second key meeting with regulators that we organised was that with Pakistan's Telecommunication Authority (PTA) at their request. This was also driven by the Governance Framework and a desire from the PTA to better understand regional approaches to regulation of the OCC industry. We took the opportunity to explain the difference between OTT and OCC and how a nuanced, light touch approach to regulation was our preferred option. It was a welcome chance for AVIA to engage in a market that has traditionally been a difficult one for us to reach.

## DATA PRIVACY

With Covid-19 lockdown measures driving increased reliance on communication apps and e-commerce, supported ever more robustly by targeted advertising, regulators in Asia have been reviewing their data privacy legislation to offer users more control over their data and greater protection against mishandling of their personal information. To help our members gain a deeper understanding of these particular issues, the policy team curated a number of webinars focusing on data privacy in China, India, Japan and Taiwan as markets which potentially have the most impact or where the proposed laws are more complicated.

Most of the proposed amendments we have seen in this area tend to indicate a move towards what is generally recognised as the "gold standard" of data protection law - Europe's General Data Protection

Regulation (GDPR). Two of the most readily adopted principles within Asia Pacific have been extra-territorial operation and the introduction of revenue-based fines. Additionally, Australia, Hong Kong, India, New Zealand, Philippines, Singapore, South Korea and Thailand have all followed in GDPR's footsteps by introducing mandatory breach notification requirements.

Notwithstanding the introduction of these "gold-standard" principles, given the very different policy priorities in each market within Asia Pacific, overall harmonisation of data privacy rules across the region remains elusive. China's policy approach continues to focus on national security with the introduction of the Data Security Law (DSL), governing important/core data, and the Personal Information Protection Law (PIPL), governing personal information which came into operation on 1 September 2021 and 1 November 2021 respectively. Together, they draw heavily on GDPR principles. The provisions relating to cross border data transfers and data localisation, which are often of key interest to our members, are less clear and need to be viewed against the backdrop of the 2017 Cybersecurity Law (CSL). Currently, all outbound data transfers will be subject to a security assessment by

the Cyberspace Administration of China, but certain volume thresholds have been introduced to determine if storage is required in China. Some transfers may be permitted with appropriate certifications or if government-mandated contractual terms are in place.

While controversial, this approach by a government taking measures towards greater sovereign control over its data, is not unique to China. India, Indonesia and Vietnam all have existing or proposed laws mandating data localisation in some form. Going forward, the challenge for many regulators will be how to strike a balance between the protection of personal information and data on one hand and fostering an environment which supports innovation, investment and economic growth on the other.

As we move towards the end of 2021, we look forward to more active (and optimistically, face-to-face) engagement with regulators across the region to continue to promote best practice trends and to offer industry insights as they strive to build a stronger and healthier video content ecosystem in each of their markets. ■



**by Celeste Campbell-Pitt**  
Chief Policy Officer, AVIA

## BUILDING FOR POST COVID GROWTH IN ASIA: THE ROLE OF THE CREATIVE AND DIGITAL ECONOMY

While Covid disrupted economies across Asia, policymakers and governments have adapted quickly to protect the health and well-being of citizens. And while much of the 'traditional' economy was disrupted, digitization and online shifts in business and entertainment are bright spots.

Across Asia, digital connectivity has facilitated work, entertainment, education, and access to health advice. In particular, video streaming has grown, with a widening array of services, content, and opportunities for the creative community to develop economically. Digital shifts expand opportunities for local stories and storytellers to reach audiences across the region and the globe.

Countries are realizing that more distribution channels provide access to broader audiences for local content creators and virtual workers on global teams. And some countries have leveraged policies and incentives to grow the creative production economies. This makes sense financially and for the creative community. Video on Demand services alone are [expected](#) to invest US\$10 bn in Asian content over the next 3 years. The multiplier economic impact is estimated to be 3 times – or close to US\$30 bn. For creative talent, the range of entertainment jobs is broad, including technical, creative, and operational roles. Such investment in the local creative ecosystem help build local skills and introduce new technologies which enhance expertise and quality.

There are also spillover benefits to other industry, such as tourism.

**Modern Policies support sustainable recovery and growth.** People-centric policies that recognize the digital nature of business and entertainment and integrate with the needs of the community are most effective. Often these start with the basics and include ensuring access to digital resources and by encouraging **digital and creative skills growth, so nobody is left behind. STEAM (Science Technology Engineering Arts and Math)** education and growth pathways including industry collaboration for digital and creative skills can play in important part.

**Policymakers can also support efforts to realize benefits of Online Curated Content (OCC).** Effective policy empowers consumers, sets high standards for the OCC industry and incentivizes investment and value creation, and responsible players have taken steps to enhance digital access and safety. These include empowering families with education and tools to control access to appropriate content and ensuring appropriate management and protection of user data.

The Asia Video Industry Association (AVIA)'s [governance framework](#) for online curated content services provides a good structure to guide policy discussions.

**It's also a great time to re-consider some of the regulatory impositions on traditional linear services to stimulate growth and evolution of this critical part of the industry.**

Combatting Piracy improves online safety, protects the economy, and supports creators. An ever-important role of regulators and policymakers is stopping illicit content providers (Pirates) from stealing content, employment, and government tax revenue. Promoting legitimate distribution, improving overall intellectual property protection regimes, and discouraging all stakeholders from supporting illegal distribution of content helps in many ways. It channels investment to legal content and creators and reduces access to illicit content that otherwise would not be permitted. An important step is to enforce and improve existing anti-piracy laws, including those that protect digital rights, and encouraging meaningful action by local criminal enforcement authorities.

**Stimulate Production and the content creation economy for sustainable growth.** Beyond skills growth, policy plays an important role in developing a globally competitive creative economy. Implementing regulatory tools such as production incentives are an efficient way to attract investment inflows while creating exposure and development

opportunities for the local media ecosystem. Over 97 automatic production incentives are operating in countries, states and provinces around the world, reflecting the benefits to the local and national economy.

**Collaboration is key to Covid Recovery and Sustainable, Effective Policy.** The changes brought about by the pandemic, amplified by the speed of technology change, show us that knowledge is power and collaboration drives success. With business models also evolving quickly, the most effective policy is achieved through collaboration and knowledge sharing between government, the community and industry. This approach can help achieve principle and risk-based regulations that are not overly prescriptive and which may be consistently enforced, so that they can accommodate technical changes.

The role of regulators and policy makers is more challenging and more relevant than ever. We salute the hard work of Governments across Asia as they have managed the social and economic impact of the pandemic. Through sound policy, governments can create a collaborative environment and a level playing field to develop a sustainable media ecosystem that works to the benefit of their communities and economies. ■

**by Jared Dougherty**

Head of External & Regulatory Affairs  
Asia, WarnerMedia, AT&T



**WARNERMEDIA** is a leading media and entertainment company that creates and distributes premium and popular content from a diverse array of talented storytellers and journalists to global audiences through its consumer brands including: HBO, HBO Max, Warner Bros., TNT, TBS, truTV, CNN, DC, New Line, Cartoon Network, Adult Swim, Turner Classic Movies and others. The organization also includes Xandr's suite of advanced advertising solutions designed to help to improve advertising for brands, publishers, and consumers. WarnerMedia is part of AT&T Inc. (NYSE:T)



# RESEARCH, DATA AND ENFORCEMENT A NEW ERA FOR CAP

Contending with piracy requires an integrated strategy comprising a number of features including enforcement, disruption and outreach. These elements are all important, and it's important to remember they don't stand in isolation to each other. Each element in CAP's strategy relies upon each other, as well as a solid foundation of information and research. These last 12 months have continued to provide unique challenges – a rising demand for content, both legal and illegal, while consumers and governments are in various states of lockdown as we continue battling through the fallout of Covid-19 that necessarily changes priorities of governments and enforcement bodies around Southeast Asia. However, this does not mean CAP has remained stagnant in our approach.

Challenges also present opportunities, and this period has allowed CAP to recalibrate our agenda, allowing for an increase of focus on our research, providing a pathway for a more integrated approach, building upon our previous work with YouGov consumer awareness and our MAGIC CAP data portal. While ambitious, integrating baseline data around economic losses to piracy in our key territories is a focus as we move in to 2022. Providing reliable and transparent data around economic losses will fill an important gap in our conversations with key stakeholders and over time, provide valuable longitudinal data about the impact of piracy.

In addition to becoming the repository for reliable data on piracy in the region, comprising economic, consumer and network data, we are working with our members to develop key pieces of research around emerging issues such as piracy over social media networks, as well as leveraging the knowledge gained from the output of our consumer surveys to undertake a deep dive into malware prevalence on pirate websites and apps.

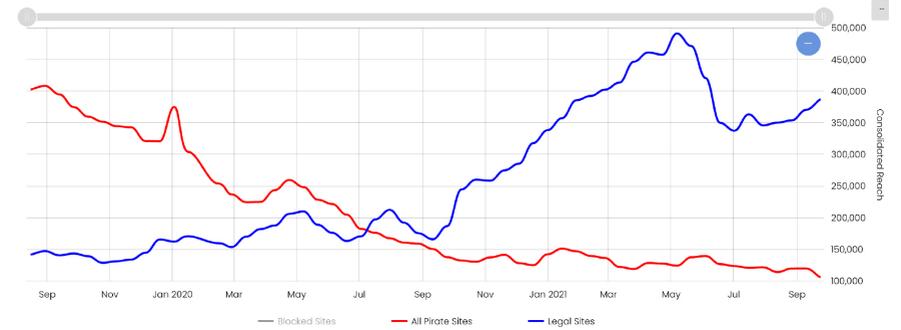
Site blocking continues to remain the cornerstone of CAP's disruption strategy, and working with local partners, coalitions and governments to introduce and enhance streamlined site blocking protocols, we have achieved extraordinary results.

## INDONESIA

Over the past two years, Indonesia has become a standout in managing an effective internal piracy problem through rapid, rolling site blocking that should rightly be looked to when facing a similar homegrown piracy problem where sites are replaced almost as fast as they can be blocked. Over the course of 24 months, CAP has submitted over 3,200 websites for blocking with access to all piracy sites (including non-CAP member content) dropping a staggering 73%.

SITE POPULARITY BY TYPE OVER TIME

Source: CAP Data Portal

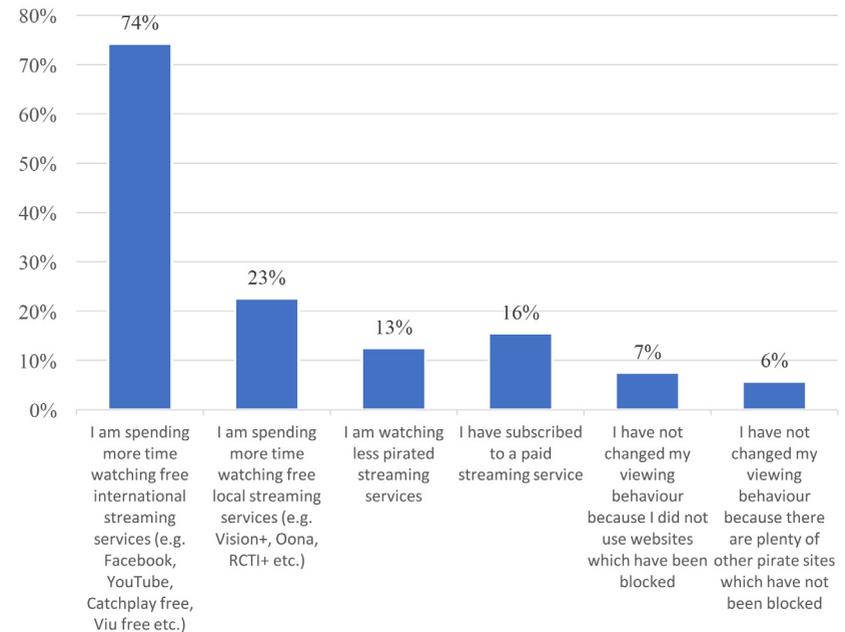


Indonesia was almost certainly one of the top two countries for streaming piracy when CAP started measuring activity. However, an efficient process allowing us to block upwards of 60 sites on a fortnightly basis has seen Indonesia as the lowest in Southeast Asia and it continues a downwards trajectory. At the same time,

we are seeing rapid growth in access to legitimate content, free and paid, which is the ultimate goal of any anti-piracy operation. This is similarly reflected in the YouGov surveys which confirm users are turning to various legitimate local and international content sources when faced with the website blocking notices.

## BECAUSE OF PIRACY STREAMING SERVICES BEING BLOCKED BY THE GOVERNMENT, HAVE YOU CHANGED YOUR VIEWING HABITS AT ALL?

Source: YouGov



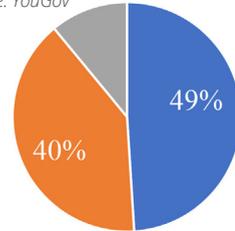
While the success of Indonesian website blocking is there to see in data, CAP continues to work with the Ministry of Communications (KOMINFO) for enhancements to the process that will see dedicated webservers blocked that are constantly attempting to work around the current blocking protocols. These processes will of course ensure appropriate evidential thresholds, checks and balances are put in place to make the workflow efficient and reliable.

## MALAYSIA

Malaysia conversely faces different website piracy issues, with a reliance on more sites that are run by overseas operators. This allows CAP to adopt a slightly different approach whereby the frequency of block needn't be as fast as replacement sites aren't created in response to the blocking orders issued by the Ministry of Domestic Trade and Consumer Affairs (MDTCA). As well as CAP submitting referrals on behalf of a number of our members, ASTRO and the Premier League also submit sites via the streamlined site blocking process. CAP's data portal is reporting over 50% drop in access to streaming piracy sites. Pleasingly, triangulation through our YouGov surveys shows that consumers self-report moving away from piracy when faced with website blocking pages. This data is consistent across countries with a functional site blocking regime, including Indonesia and Singapore.

### CONSUMER BEHAVIOUR WHEN NOTICING PIRATE SITES BLOCKED BY MDTCA

Source: YouGov



- Yes - and I no longer access piracy services
- Yes - and I only rarely access piracy services
- Yes - and I find alternative piracy services

## PHILIPPINES

In the Philippines, a consolidated draft of the IP Code amendments that would see empowering the Intellectual Property Office (IPOPHL) to manage website blocking, the first legislated process in the territory, has been released. Although the timing for passage into law is likely to have a long lead time with upcoming elections, these amendments represent acknowledgement in the territory that website blocking is an efficacious strategy of dealing with the problems of piracy. The draft code does have some concerns the payment of a bond in order to use the site blocking process, which CAP has argued strongly against in follow up submissions. We are coordinating with other parties,

both local and international, to represent a united voice on this issue.

CAP has also signed a Memorandum of Understanding with the IPOPHL that allows for the creation of a rolling website blocking process and data sharing. This MoU is significant when coupled with the fact that IPOPHL will be custodians of the legislated website blocking regime; as such, CAP is working to ensure any process will address issues that frequently arise any time site blocking is introduced into a new territory.

## SINGAPORE

In Singapore, a new Copyright Act has been read into parliament that will come into force by the end of 2021 that will criminalise the sale of, and provision of service of infringing apps and devices. CAP and a number of partners worked extensively with the Ministry of Law to ensure that the intent of the law was

met prior to its tabling in parliament, and we are optimistic that the legislation will effectively mitigate the overt sales of infringing apps and services.

As we move forward into 2022 with the world taking tentative steps into opening, CAP is poised to capitalise on our significant successes and build upon them as we move forward. We will continue to work with governments who have implemented effective site blocking and adapt strategies in response to pirate activity and continue working with those who are currently exploring and developing their respective rolling site blocking regimes. While Covid-19 has slowed down physical enforcement activities, we are optimistic that this will return to being a larger part of CAP's activities across Southeast Asia over the next 12 months, supporting our expanded research and disruption strategies. ■



by Aaron Herps

General Manager, Coalition Against Piracy (CAP)



## PIRACY AND ONLINE ABUSE:

### A CLEAR AND PRESENT DANGER AS THE COUNTRY SHIFTS TO A DIGITAL ECONOMY

In January 2021, WeAreSocial reported that there are 74 m internet users in the Philippines or an increase of 4.2 m Filipinos online versus the same period last year. More and more Filipinos are going online due to the pandemic lockdowns and restrictions. They now rely on the internet for work, school, doing transactions, getting essentials, and entertainment.

This shift to a digital lifestyle however, has emboldened content pirates as demand increased. A study by AVIA in the third quarter of 2020 revealed that 49% of Filipinos are accessing piracy streaming sites. This placed the country as the third highest consumer of illegal content after Thailand (53%) and Vietnam (50%).

In the 2020 Metro Manila Film Festival for instance, unofficial sources reportedly disclosed that the fully digital festival only raked in 3% of gross revenues compared to 2019, and online piracy is identified as the main culprit. Aside from revenue losses on the side of OTTs and the entertainment industry, we also look at the larger issue which affects everyone - cybersecurity. Downloading illegal sites spreads malware and increases the incidence of fraud. In fact, about half of Filipino respondents recognize that online piracy results in job loss, increases the risk of malware infections, and defrauds the government of taxes.

For the time being, the fight against online piracy is an arduous one. At the moment, Filipino legislators are beginning to see the need to address this through enabling laws. The House of Representatives Committee on Trade and Industry in fact is working on finalizing a bill that will revise the IP Code of the Philippines. It contains site blocking provisions against pirated content. However, similar to many countries, this process takes time.

Globe has joined hands with AVIA and other organizations to combat this clear and present danger. Since 2017, the company has embarked on its award-winning [#PlayItRight](#) campaign which encourages customers and the public to play content from legitimate sources. Through this campaign, Globe raises awareness of consumers on the negative impacts of online piracy and also protects the economic value of filmmakers and content creators.

[#PlayItRight](#) has three main pillars: raise awareness on online dangers such as malware, illustrate the negative social impact of piracy such as the loss of jobs, and highlight that digital piracy is a criminal activity. It is a campaign that cuts across several industries: film, music, digital literacy, and education.

Beyond digital piracy, Globe has also been ramping up its efforts to help the



government put an end to Online Sexual Abuse and Exploitation of Children or OSAEC. OSAEC is a serious concern since it is significantly rising with its borderless nature, advances in technology and more time spent online.

In the Philippines, the Department of Justice-Office of Cybercrime reported a total of 1.2 m cyber tips in 2020, a stark increase from 400,000 in 2019 or a 209% increase. Prolonged lockdowns which restricted mobility of children and young people, resulted in more time being spent online, and making them more vulnerable to online predators\*.

Globe has been partnering with international organizations so we can actively block illicit sites, leveraging on our network technology. We are likewise advocating for more action, such as legislation, to protect Filipino children in this new digital landscape. We must act decisively and collectively to combat this digital pandemic.

To promote data privacy among children, Globe partnered with the National Privacy Commission (NPC) for its “Kabataang Digital” initiative. The program aims to provide age-appropriate support for children to help them understand the nature of privacy and the digital environment’s implications on their privacy rights.

The company’s Digital Thumbprint Program (DTP) takes a more holistic role on youth intervention by focusing on responsible digital citizenship including curbing cyberbullying, critical-thinking, and prevention of online abuse among others.

The DTP has been recently integrated into the K-to-12 curriculum of the Department of Education (DepEd), educating public and private school teachers and students on proper online behaviour. Globe’s cyber wellness program has already been made accessible to over 4,100 schools, 115,00 teachers, and nearly 2 m students all over the country. ■



**by Yoly C. Crisanto**

Chief Sustainability Officer and SVP for Corporate Communications, Globe Telecom

**GLOBE TELECOM, INC.** is the leading mobile operator in the Philippines. It serves the telecommunications and technology needs of consumers and businesses across an entire suite of products and services including mobile, fixed, broadband, data connectivity, internet and managed services. It has major interests in fintech, digital marketing solutions, venture capital funding for startups, and virtual healthcare. Its principals are Ayala Corporation and Singtel.

\* Source: <https://www.unicef.org>

## HOW TO BATTLE PIRATES IN THE DIGITAL AGE

The Video Entertainment industry has had to, like all of us, deal with a great deal in the past two years. From sky-rocketing consumer demand combined with shortened release windows, the industry has had its share of challenges. But let's not forget the threat of piracy that lurks in the shadows, ready to steal the output of film studios and content producers.

Fighting pirates is not easy and the threats are constantly changing. From what we have observed, pirates are increasingly exploiting vulnerabilities in OTT services, which was to be somewhat expected with the recent rise in use of these platforms. Operators must of course think about security and protection, but what must also be considered is the reliability, scalability, and efficiency of the platform. Security and protection come at a cost, and we understand that operators don't always have an independent budget to allocate to these services.

To thwart pirates, operators need to think like pirates. Are there any security vulnerabilities in my infrastructure that would enable the piracy? Do I have robust content protection and security technologies deployed to protect my valuable content? With this comes three other factors to consider: time to implement, cost to implement, and impact of the implementation. Let's explore this further.

### SECURITY

If operators are looking to launch a new OTT service, the first step is to use a multi-Digital Rights Management (DRM) and content usage management solution. Operators can eliminate the simple things. From here, things become a little more nuanced, such as managing credential sharing and other forms of OTT piracy and security threats including recent browser attacks, which pirate networks are leveraging to provide content directly from operator CDNs. A combination of robust DRM technology, AI driven analysis to identify suspect behaviour and detailed investigations are required to identify and address these piracy and security threats.

Operators can also add watermarking to their content so that it can be located more easily. Irdeto's TraceMark™ supports different use cases, from tracking security weaknesses in distribution channels to identifying individual pirate sessions to disrupt unauthorized streams at the source. Whether you are trying to protect live or video-on-demand content or whether you deliver your content over Satellite or OTT platforms, Irdeto has a watermarking solution that is optimal for content protection needs.

### RELIABILITY & SCALABILITY

With streaming platforms becoming the norm to turn to for content, the



expectation of a high-quality and seamless streaming experience is also the norm. Operators must ask themselves: are my platforms up to the task to support my subscriber growth? Can we handle high-profile events such as live concerts, sports events, or online movie premieres? Is a 99,9% Service Level Agreement (SLA) enough these days? All these questions need to be answered to ensure that consumers remain happy with the service they've subscribed to.

### EFFICIENCY

With the continued trend toward SaaS and Cloud solutions rather than license or on-premises implementations due to these solutions offering higher service levels and scalability, it means that service providers benefit from the scale that a company like Irdeto can offer. For example, Irdeto offers an industry-leading service; 99,999% SLA, and we serve well over 3 bn DRM licenses monthly, and that number only continues to grow.

The best solutions for combatting piracy in the digital age combine technology, enforcement and education. The first step is to have a deep understanding your threat landscape. Effective content protection in the digital age starts with cyber resilience and combines robust CA/DRM, watermarking and rapid detection and takedown of pirated content. Stronger enforcement actions (civil and criminal) are also a crucial component to deter other pirates and to redress damages that your business may have sustained. Last, but not least, education campaigns are critical in helping to instill in the community (particularly at an early age) a respect for creativity and the value of intellectual property. Balancing security with reliability, scalability and efficiency is the key to success. ■



by Mark Mulready

Vice President - Cyber Services, Irdeto

**IRDETO** is the world leader in digital platform security, protecting platforms and applications for video entertainment, video games, connected transport, connected health and IoT connected industries. Irdeto's solutions and services enable customers to protect their revenue, create new offerings and fight cybercrime effectively. With more than 50 years of expertise in security, Irdeto's software security technology and cyberservices protect more than six billion devices and applications for some of the world's best-known and loved brands.

## THE BENEFITS OF STRONG INTERNATIONAL CO-OPERATION IN THE FIGHT AGAINST PIRACY

A consumer innocently stumbles on a video service that features the content they're looking for. Finding it at a bargain price they sign up to the service. When they go back a few days later to watch the next episode of the latest season of their favourite show, they are shocked to find a banner saying that their service is a pirate offering and has been taken down. They're also shocked to find out that the six-month mega-deal they selected and paid for has also disappeared with little chance of a refund.

Despite hard-hitting and targeted consumer education programs around the risks of piracy, few consumers are likely to pass-off a seemingly genuine deal offering value for money. Services run by pirate organisations are becoming increasingly convincing with slick websites, customer support popups and all the trappings of a genuine service to lure consumers in. This demonstrates that far from being causal in approach, content and service piracy today is akin to organised crime – with illicit revenues fuelling lavish lifestyles for those at the top of the piracy ring.

But with increasing sophistication, how can such pirate organisations be apprehended?

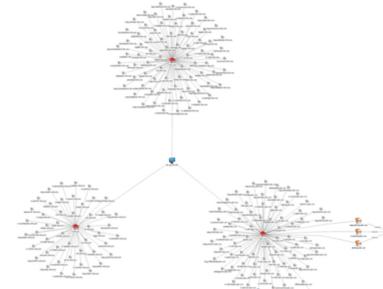
For a single operator, movie studio or aggregator, to tackle piracy by themselves requires huge investments to track, document and prosecute. That's

why around the world, organisations such as AVIA – through their Coalition Against Piracy (CAP) - are broadening their approach to piracy through multi-disciplined consortia of companies who all have a role to play in apprehending the pirates. This in turn protects the ability of the creative industries to generate revenue from content which ensures the production of new titles.

NAGRA is a proud member of several such consortia around the world and one example is our membership of Alianza in Latin America. Comprised of an international mix of broadcasters, programmers, content owners, vendors and industry bodies, their aim is clear – crack down on piracy and cybercrime. Its results are also impressive. Now in the third wave of its 'Operation 404', these combined forces have created a multi-jurisdictional effort throughout Brazil to curb digital piracy which has elevated Brazil to be a leader in this space across Latin America. With 790 websites shut down, at least 250 illegal apps closed and dozens of search and seizure warrants implemented, the latest phase that took place in July 2021 capitalised further on these successes.

Many companies that operate in a criminal manner maintain a façade of legitimate business. The true purpose of their operations can only be noticed through permanent surveillance and the use of

Images from Operation 404 Raids in Brazil. Credit: Alianza



Understanding the Pirate Ecosystem Map.  
Credit: NAGRA Anti-Piracy Solutions

technologies that make it possible to identify the trail of offenders. The violation of copyright, by the unauthorized display or retransmission of IPTV or streaming content, is not limited to the loss of the audio-visual chain but extends further into local economies which then fail to create jobs and collect appropriate taxes. For the consumer, whilst they may feel they're getting a bargain, they often don't realise that in subscribing, they're also exposing themselves to the risk of having personal data captured by malware present in pirate applications.

Through its technology, solutions and services, NAGRA continues to support organisations worldwide in tracking, evidencing and filing complaints about pirate activity. Through a highly skilled, multi-disciplinary team of ex-law enforcement agents, lawyers, forensic experts and data analysts, our technology continually scours the web for illicit activity which when identified, constructs relationships between the different entities to allow a dossier to be created. To learn more or get a demonstration of our services, contact my colleague [Pascal Metral@nagra.com](mailto:Pascal.Metral@nagra.com) for more information. Together, we can beat piracy and protect our industry! ■



by **Tim Pearson**

Senior Director, Solution Marketing, NAGRA

**NAGRA** the digital TV division of the Kudelski Group (SIX:KUD.S), provides security and multiscreen user experience solutions for the monetisation of digital media. The company provides content providers and DTV operators worldwide with secure, open and integrated platforms and applications over broadcast, broadband and mobile platforms, enabling compelling and personalized viewing experiences. Please visit [dtv.nagra.com](http://dtv.nagra.com) for more information. Follow us on [Twitter](#) and [LinkedIn](#)

## USING ANTI-PIRACY TOOLS TO TACKLE ONLINE ABUSE

Many will have seen the coverage of the sickening racist abuse aimed at England footballers following their defeat in the final of UEFA Euro 2020. Sadly, however, this was just the latest high-profile incident of online discriminatory and threatening abuse being directed towards public figures in sport and entertainment around the world.

The issue is one that the Premier League has been grappling with for some time, with many similarities to the battle against online piracy. We have therefore adapted and deployed many of the resources, skillsets and techniques developed through our global anti-piracy strategy.

For the last two years we have used our existing anti-piracy scanning technology to proactively monitor social media platforms to identify abusive content and immediately report it for removal. However, this is even more challenging than finding copyright infringing material, given we cannot rely on definitive digital fingerprint matches amongst the hundreds of millions of social media posts made every week. We therefore supplement this monitoring with a live reporting system, based on the piracy reporting tool we offer our broadcasters, to enable victims and our Clubs to alert us to any such abuse.

Just as with online piracy, we apply significant pressure to the platforms to improve their thresholds and removal

times, enhance their filtering and address the ease with which people can set up anonymous accounts. This has resulted in some positive steps from the platforms, though there is plenty more they can do; likely a familiar tale to many AVIA members.

The parallels with the world of piracy continue, with deterrent legal actions having an equally significant role to play in tackling online abuse. Each time an incident is reported to us, our in-house investigative team immediately set about trying to identify and locate the perpetrator. Whilst abusers often deliberately attempt to conceal their identities, many messages can still be traced back to an individual. This is often through the same open source and covert investigative techniques that we have used to support many of our successful anti-piracy cases in the last 12 months, including the collaborative operation to shut down Mobdro and the knock & talk action against the operator of the StreamCR7 streaming network.

Where we can identify a perpetrator, we will leverage the legal and law enforcement relationships we have developed around the world and pursue actions through the courts wherever possible. Singapore offers a perfect example of this. After threatening direct Instagram messages were sent to Brighton and Hove Albion FC's Neal Maupay, for nothing more than



scoring a goal in his previous match, our investigations found the account holder living in Singapore. Through our Singapore Office, we swiftly filed a criminal complaint with the police and worked with them and prosecutors to provide the evidence they required to bring charges. The subsequent high-profile criminal case resulted in the perpetrator being convicted and sentenced to nine months' supervised probation. It was a vital case in demonstrating to social media users in Singapore and around the world that abuse will not be tolerated and will result in serious consequences for anyone engaging in it.

Our educational messaging is of course not limited to publicising deterrent cases, important though that this. We have spent considerable time raising the above issues with football stakeholders, government

officials and prosecutors and have been seeking to inform the wider public on the topic, most recently through an explanatory video on the importance of players 'taking the knee' at the start of each match.

Online abuse is clearly a very important and challenging issue, but one where we believe meaningful progress can be made by leveraging and adapting the expertise and relationships developed through the ongoing battle against global piracy. ■



by **Stefan Sergot**

Head of Legal – Enforcement, Premier League

**THE PREMIER LEAGUE** is home to some of the most competitive and compelling football in the world. The League and its clubs use the power and popularity of the competition to inspire fans, communities and partners in the UK and across the world. The Premier League brings people together from all backgrounds. It is a competition for everyone, everywhere and is available to watch in over 1 bn homes in 189 countries.

## THE FUTURE OF QR CODE AUTHENTICATION

A major problem that confronts IP licensors today is how they can monitor for fakes, as well as maintain a high degree of quality control, amidst the logistical challenges posed by the Covid pandemic. Conceivably, QR (Quick Response) codes may serve as a clever technological solution. A QR code is essentially a two-dimensional barcode. In most cases, they can be scanned by built-in smartphone camera apps and can then direct a user to a specific website. QR codes may be static or dynamic. Static QR codes cannot be edited or tracked once created. They are typically used in situations involving one-off interactions, such as entry to a sporting event. In contrast, dynamic QR codes can be edited after creation. This allows URLs to be updated or systemic glitches to be fixed. Dynamic QR codes can also be used for tracking purposes.

The adoption of QR codes has been swift and widespread in the Covid age. Crucially, a QR code can inform a consumer about the authenticity of a product. And, therefore, flag whether any defect in a product arises from an 'internal' quality control problem or an 'external' counterfeiting problem. However, the adoption of QR codes can also lead to a fresh set of problems. It is relatively easy for counterfeiters to generate fake QR codes and mislead a consumer into thinking that a spurious product is genuine. Worse, QR codes

may even be used to hack into phones. We made enquiries with various clients who use QR codes and found most to be aware of these potential risks, but many uncertain about a fool-proof system to avoid them. However, we found one technology to be quite impressive, substantially reducing the risks of 'code-jacking'. We accessed the technology from our parent company Authentix Inc., which currently provides this technology to clients under its digital platform DigiTrax™ and refers to the specialized code format under the acronym sOVD or trade name HoloCODE™. The technology involves a specialized product label that attaches a confirming, secure 'digital twin' to the QR code, in the form of a holographic glyph pattern. Thus, if a counterfeiter hypothetically fakes a QR code, the counterfeiter will still fail to mislead a person scanning the code, as the authentication process would also require simultaneously authenticating the holographic glyph during the scanning process. Each glyph is unique, serialized, and directly associated with the unique QR code twin, thus making it virtually impossible for a counterfeiter to duplicate. Although the system does require a quick download of a mobile application, it was easy to use. We reproduce a self-explanatory photograph below, with the name of the solution provider omitted and the QR code directing the user to an Authentix DigiTrax™ web page (for demonstration purposes only).



sOVD/HoloCODE™ visible QR with secure holographic image twin

The price of purchasing or licensing this technology would be higher than the lone QR code itself. However, given the extra security and benefit that follows, this may well be worth the investment. For mass consumer products, there also lies the challenge of educating consumers about the authentication process and urging consumers to dutifully authenticate each purchase, entailing additional marketing costs for creating this awareness amongst the consumer base. One would imagine, though, that the pros would outweigh the cons significantly over the long term. Looking ahead, therefore, the future of QR code technologies will likely lie in 'QR plus' technologies of this kind — a market that is likely to be increasingly crowded and competitive in the days ahead. ■



by Bharat Kapoor

VP of Online Brand Protection, Authentix

**STRATEGIC IP INFORMATION PTE LTD** ("[SIPI](#)") is a leading online brand protection service provider in Asia and works with over 250 brands to protect their IP online. SIPI was recently acquired by Authentix, a leader in authentication and track and trace technologies. SIPI also runs one of the largest anti-piracy databases, Veri-Site, in the world focused on providing intelligence to fight piracy.

# HOW PIRATES ARE PROFITEERING FROM BROKEN OTT PROTOCOLS

Streaming pirates are exploiting vulnerabilities in the OTT protocol to steal not just high-quality content but entire OTT services.

Even worse, they redistribute the stolen content to their paying customers at the expense of the video service provider by using their infrastructure undetected. Streaming piracy is an existential threat, siphoning off billions of dollars that rightfully belong to rights holders, content owners and video service providers. A recent global study conducted by Ampere Analysis for Synamedia found that around US\$28bn is lost to sports streaming piracy alone.

## SOURCING, AGGREGATING AND DISTRIBUTING CONTENT

Pirates have found different and more concealed ways to source content –

ranging from DRM hacking as seen recently with Widevine, to bypassing client watermarking, manipulating legitimate OTT applications and pulling content straight from the content delivery network.

Pirates run their criminal operations, so they don't need to set up labs and require minimal or no investment in infrastructure. They sell the stolen content to end users on open internet sites and social media, or sell on to pirate IPTV wholesalers and resellers, who then make their money selling direct to consumers and by wrapping advertising around the stolen content.

Some illegitimate, subscription-based pirate services are so good that users think they're using the brand's own service, damaging the brand of the legitimate service and preventing upsell opportunities.

### Piracy ecosystem



## TACKLING PIRACY AT SOURCE

Many rights holders and providers mistakenly believe that current approaches - such as DRM, client hardening and concurrency limits - will provide adequate content protection. But these technologies are scratching the surface of OTT piracy and meanwhile, pirates go undetected.

Using the intelligence provided by our operational security team and access to pirates' scripts, we have unearthed the root source of this problem - the OTT protocol is broken. Exploiting these weaknesses in OTT protocols is one of the easiest ways for pirates to steal content and services.

With an understanding about the methods used and insight into how pirates operate, we have developed the industry's first solution to address the vulnerabilities that make it easy for pirates to steal entire OTT services with Synamedia OTT ServiceGuard.

Synamedia OTT ServiceGuard protects content across open platforms - whether mobile, web, or smart TV - and is the first to extend the service protection to the content delivery network itself, to stop pirates from stealing content from the point of distribution. With video service providers facing increased pressure from

rights holders to fight piracy, the new solution makes it possible to securely distribute content on open platforms by validating that only legitimate subscribers and applications are granted authorised access and receive content.

## PUTTING AN END TO PIRATE PROFITEERING

Tackling piracy requires an intelligence led model embracing both protective and proactive approaches and technology solutions. As well as properly protecting content, anti-piracy initiatives also require continued investment in streaming piracy detection and disruption. An intelligence services model that marries cyber as well as field and human intelligence to track the pirates' every move is critical.

By tackling OTT piracy head on, operators, content owners and rights holders can not only protect their content investments, but video service providers can cut infrastructure costs and create the opportunity to capture new subscribers. ■



by **Avigail Gutman**  
VP of Intelligence & Security Operations, Synamedia

**SYNAMEDIA** is committed to providing the world's most complete, secure and advanced end-to-end open video delivery solution. Building on more than 30 years of expertise, the firm is the largest global provider of video solutions, trusted by over 200 top satellite DTH, cable, telco and OTT operators, content owners and broadcasters.



## TRANSFORMING THE PIRACY LANDSCAPE IN SOUTHEAST ASIA

### HOW TO CONVERT ILLEGAL IPTV USERS TO PAID SUBSCRIBERS WITH ANTI-PIRACY SERVICES

Video piracy is widespread across the Asia Pacific region, particularly in Southeast Asia where there is a prevalence of Illicit Streaming Devices (ISD), which severely threatens the revenues of pay-TV operators. A recent YouGov consumer survey reported in the Asia Video Industry Report 2020 revealed that in Indonesia 29% of consumers use an ISD to access pirated content, while 63% of respondents access piracy streaming websites. In Vietnam, 66% use an ISD to access content and 61% have accessed piracy streaming websites.

The YouGov survey also shed light on the relationship between consumers who access pirated services via ISDs and subsequently cancel their legal

subscription services. In Thailand, 30% of ISD users stopped paying for a legal subscription service, which is equivalent to about 3 m subscribers and US\$1 bn in revenue across a three-year period.

#### WHY ANTI-PIRACY SERVICES ARE CRITICAL

Adopting an anti-piracy strategy is critical for protecting revenues and investments in proprietary, premium content given the serious piracy threat that exists in Southeast Asia. Using an anti-piracy service with monitoring, dynamic watermarking, and take-down tools, content and service providers can efficiently identify and take down pirated content.



Monitoring social media channels, niche websites, search engines, pirate apps, and other online sources of illegal content distribution 24/7, service providers can rapidly detect piracy and remove it from the web. With the latest AI technologies, service providers can dramatically speed up the process of removing illegal content, detecting the sources of illegal credential sharing in real time.

Dynamic watermarking enables service providers to identify the source of a leak in the video delivery chain within minutes. Content is marked with an invisible watermark, and algorithms can be dynamically changed to address the evolving nature of piracy.

Aside from merely stopping illegal content redistribution, operators can use anti-piracy services to convert illegal users to legal users.

#### CONVERTING ILLEGAL USERS TO PAYING SUBSCRIBERS

It's common today for live and VOD content to be redistributed for free on the internet through link farms, user-generated content, and private websites. In this case, the business models of the hackers are mainly ad-based. While it is essential for operators and content owners to tackle this type of piracy, the conversion rate to paying subscribers will be very slim because users are already accessing the content for free.

Another way that content is redistributed is through illegal IPTV networks, which require a subscription. In this case, users are paying to subscribe to an illegitimate service for various reasons, such as lack of available content in the area. Therefore, the chance of converting to a paying subscriber is much better.

Through an anti-piracy service, content providers and operators can investigate the professional end of the illegal services market. The anti-piracy service will provide operators with a list of all the illegal IPTV brands that offer a full IPTV service in direct competition with the local, legal operator TV services. An initial investigation will be conducted for each brand, collating information on the offered live channels and VOD assets, network infrastructure and the number and location of video servers. By the end of this stage, operators will have a clear, quantifiable idea of how piracy is affecting their subscriber base.

Once operators are armed with critical information about illegal IPTV services, they can begin taking remedial action and driving illegal users to legal alternatives and defending their revenue streams. ■



by Mathieu Harel

Marketing Director, Anti-Piracy Services, Viaccess-Orca

**VIACCESS-ORCA** is a leading global solutions provider of OTT and TV platforms, content protection, and advanced data solutions. The company offers an extensive range of innovative, end-to-end, modular solutions for content delivery, protection, discovery, and monetization. With over 20 years of industry leadership, Viaccess-Orca helps content providers and TV operators shape a smarter and safer TV and OTT experience.

## BOOMING SOUTHEAST ASIAN PIRATE SITES LEAD THE WORLD IN RISKY ADS

Southeast Asian viewers of pirate websites are served far more 'risky' ads on average than those in the US, the EU and around the world at large.

Across the region, as many as 40% of all ad impressions on pirate sites - those

that illegally supply copyrighted content - fall into the risky category, promoting pornography and gambling or else attempting to perpetrate fraud and spread malware.

Country/Region	% ad impressions on piracy websites by risky category			
	Adult	Fraud & Malware	Gambling	Total Risky
Malaysia	6%	1%	5%	12%
Indonesia	2%	7%	29%	38%
Singapore	8%	3%	11%	22%
Vietnam	<1%	<1%	79%	80%
Philippines	7%	3%	<1%	10%
Thailand	8%	3%	73%	84%
Hong Kong	23%	<1%	10%	33%
SE Asia Average	8%	3%	29%	40%
United States	19%	5%	1%	25%
EU Average	21%	5%	7%	33%
Global Average	19%	5%	5%	28%

White Bullet IPIP data from period Aug 2020 - Jul 2021

The figures, generated by White Bullet's IP infringement monitoring network, reinforce the complex threat of content piracy - which includes illegal streams of Premier League games, pay-per-view fights, films, subscription TV series and other commercial content - and they also underline the essential revenue such criminal operations draw from advertising.

The research shines a light on telling local and regional variations and illustrates how IP fraud draws on other forms of crime wherever it exists.

The abundance of risky ad impressions from Southeast Asian pirate sites - compared to 25% in the US, 33% in the EU and 28% globally - is swollen by a flood of gambling ads in Vietnam and Thailand. In those markets, where most forms of gambling are illegal to locals, black-market providers have resorted to illicit media to promote their services. Consequently, 79% of all ad impressions on pirate sites in Vietnam relate to gambling, and 73% in Thailand - with online casino games by far the most popular kind.

By contrast, in Malaysia, where offline gambling is legal but online gambling prohibited, gambling ads only account for 5% of all advertising impressions on pirate sites.

The illegal content business is booming across the broader region, [causing huge damage to intellectual property owners](#) and to the global economy as a whole. In five out of six Southeast Asian nations, more than half of consumers accessed illegal streaming sites in 2019 [source: AVIA], and in the past two years, Indonesia, Vietnam and other countries have been added to the U.S.'s "notorious markets" list, which groups the world's worst IP abusers and counterfeiters.

Statista predicts that piracy will cost the TV and film industries almost US\$52 bn in revenue worldwide in 2022. But many brands still don't appreciate that a proportion of their programmatic online advertising can easily find its way to highly efficient criminal sites.

White Bullet calculates that internet content pirates generate US\$1.34 bn in ad revenue globally [source: DCA], with the most-visited pirate websites individually making many millions each year from advertising alone.

Today's technology enables advertisers to cut pirate sites out of their ad supply chains, protecting their brands and ensuring their budgets don't go astray. There is also substantial evidence that coordinated efforts between regulators, law enforcement and ISPs can greatly

damage the pirate content business and its ad-funded model.

Earlier this summer, [a YouGov study of Vietnamese viewing behaviour](#) commissioned by the Asia Video Industry Association's Coalition Against Piracy (CAP) found that 60% of consumers in Vietnam access streaming piracy websites or torrent sites, and that 59% of those had cancelled their subscriptions to legitimate local and international content services.

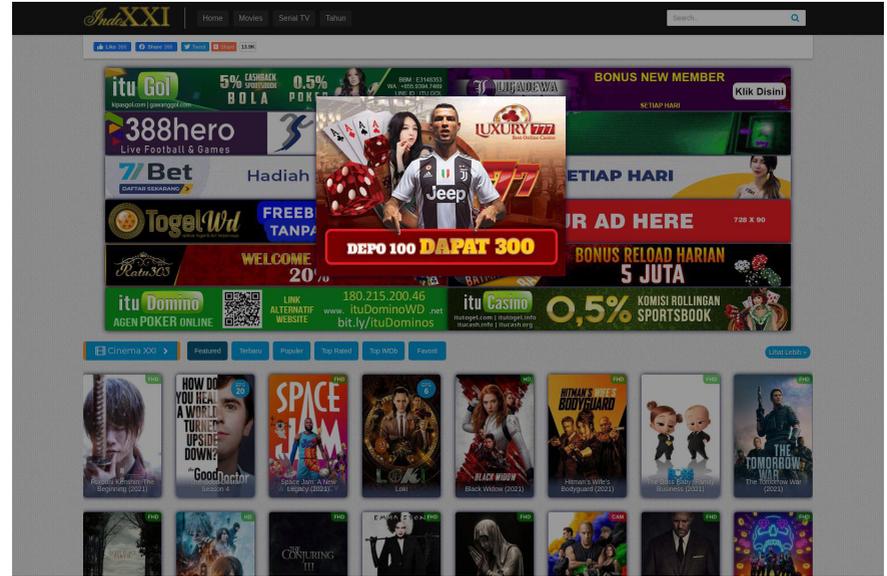
However, in neighbouring Malaysia and Indonesia, where the governments have both launched proactive piracy site-blocking initiatives, rates of online

piracy, previously comparable to those of Vietnam, fell dramatically between 2019 and 2020 - by 55% in Indonesia and by 64% in Malaysia [source: YouGov].

Although not a Southeast Asian country, another significant challenge exists in Hong Kong. The Chinese Special Administrative Region stands as the global capital of unsavoury advertising, with 74% of local pirate websites carrying risky ads: 16% carry adult, 27% carry fraud and malware and 46% carry gambling ads [see table two]. In total, 33% of all advertising impressions on such sites in Hong Kong come from the unsafe end of the spectrum.

Country/Region	% of pirate websites that carry risky ads			
	Adult	Fraud & Malware	Gambling	Total Risky
Malaysia	9%	18%	42%	52%
Indonesia	13%	27%	41%	60%
Singapore	15%	27%	42%	61%
Vietnam	8%	23%	37%	57%
Philippines	10%	25%	33%	58%
Thailand	11%	23%	45%	57%
Hong Kong	16%	27%	46%	74%
SE Asia Average	12%	24%	41%	60%
United States	38%	36%	26%	67%
EU Average	39%	37%	32%	65%
Global Average	33%	34%	33%	64%

Source: White Bullet IPIP data from period Aug 2020 - Jul 2021



Figures like these highlight the apparent ubiquity of unsafe advertising wherever illegal content thrives, but success stories in the fight against IP crime demonstrate potential remedies on several fronts. Targeted blocking action against pirate sites can make a genuine impact, as can

strategies that enlist ISPs, ad networks and legitimate advertisers to defund the advertising that funds such domains. We might never slay the beast of copyright crime, but where the will exists, we can strike back where it hurts. ■



by Peter Szyszko  
CEO, White Bullet

Founded in 2013 by a leadership team of experienced Intellectual Property lawyers from the media and advertising industries, **WHITE BULLET** offers companies piracy risk data and protection, brand safety solutions, and full transparency on their advertising placement and digital supply chains. With offices in London, New York, and Los Angeles, White Bullet also advises policymakers and government bodies on regulatory and compliance programs globally.

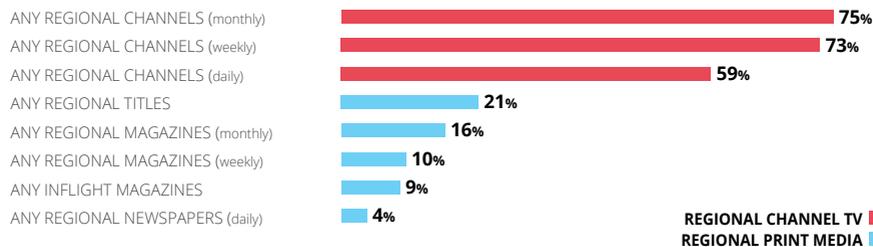


## REGIONAL CHANNEL TV VIEWERS

	VIEWED YESTERDAY	NOT VIEWED IN PAST MONTH
INDIA	78%	14%
PHILIPPINES	75%	18%
INDONESIA	74%	17%
MALAYSIA	65%	25%
TAIWAN	63%	23%
SINGAPORE	59%	33%
THAILAND	57%	31%
SOUTH KOREA	55%	20%
HONG KONG	37%	42%
AUSTRALIA	36%	40%

Source: Ipsos Affluent Asia Survey H1 2021  
Reported markets: Thailand, Hong Kong, Indonesia, Malaysia, The Philippines, Singapore, Taiwan, India, South Korea, Australia  
Viewed regional TV yesterday and Not viewed any regional TV in past month

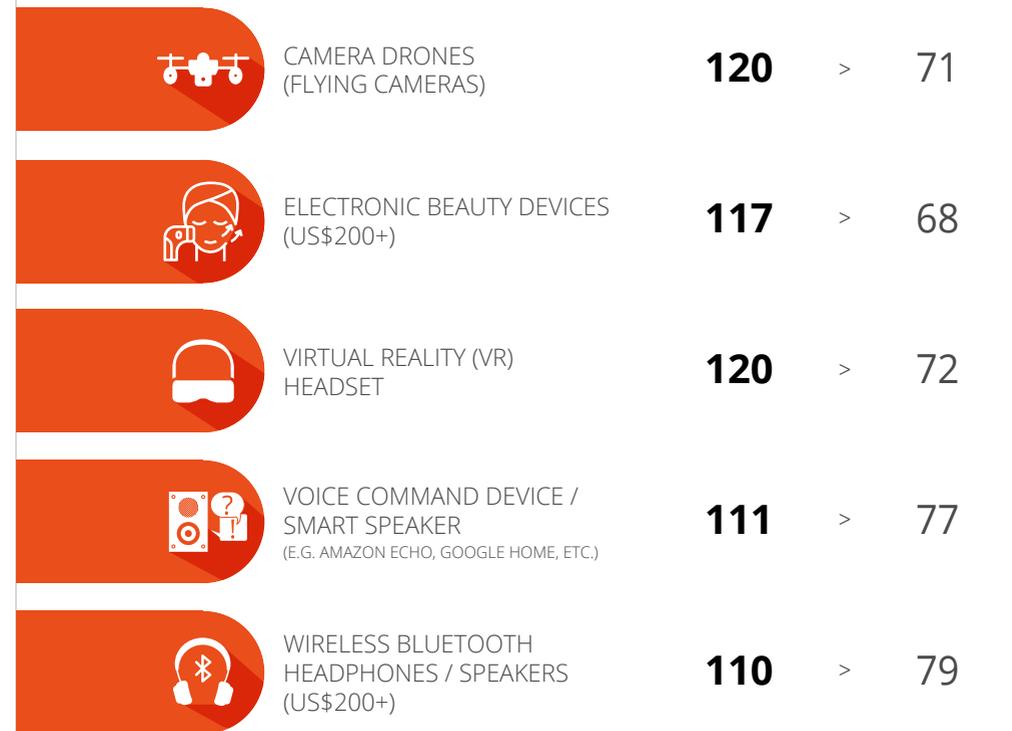
## REGIONAL CHANNEL TV CONSUMED MORE THAN OTHER MEDIA



Source: Ipsos Affluent Asia Survey H1 2021  
Reported markets: Thailand, Hong Kong, Indonesia, Malaysia, The Philippines, Singapore, Taiwan, India, South Korea, Australia

## AFFLUENT VIEWERS ARE EARLY ADOPTERS...

OWNERSHIP INDEX



Source: Ipsos Affluent Asia Survey H1 2021  
Average Base Index: 100.  
Reported markets: Thailand, Hong Kong, Indonesia, Malaysia, The Philippines, Singapore, Taiwan, India, South Korea, Australia  
Viewed regional channel TV yesterday and Not viewed any regional channel TV in past month

## KEY DECISION MAKERS...

INDEX	WATCH		DONT WATCH
	REGIONAL TV		
 INTEND TO BUY A CAR IN NEXT 12 MONTHS	<b>113</b>	>	75
 TOP MANAGEMENT	<b>124</b>	>	62
 OWN BONDS	<b>126</b>	>	61
 OWN COLLECTIBLES AS AN INVESTMENT (E.G. ART, ANTIQUES, GEMS, ETC.)	<b>117</b>	>	45
 OWN COMMODITY FUTURES / OPTIONS	<b>121</b>	>	78

Source: Ipsos Affluent Asia Survey H1 2021  
 Average Base Index: 100.  
 Reported markets: Thailand, Hong Kong, Indonesia, Malaysia, The Philippines, Singapore, Taiwan, India, South Korea, Australia  
 Viewed regional channel TV yesterday and Not viewed any regional channel TV in past month

## LUXURY SPENDERS...

INDEX	WATCH		DONT WATCH
	REGIONAL TV		
 OWN QUALITY / DESIGNER ACCESSORIES & FOOTWEAR WORTH US\$10,000+	<b>126</b>	>	53
 OWN JEWELLERY WORTH US\$10,000+	<b>118</b>	>	78
 OWN A LUXURY WATCH WORTH US\$10,000+	<b>112</b>	>	86
 OWN QUALITY / DESIGNER CLOTHES & LEATHER GOODS WORTH US\$10,000+	<b>111</b>	>	81
 CONSUMED BRANDY / COGNAC IN PAST 4 WEEKS	<b>125</b>	>	58

Source: Ipsos Affluent Asia Survey H1 2021  
 Average Base Index: 100.  
 Reported markets: Thailand, Hong Kong, Indonesia, Malaysia, The Philippines, Singapore, Taiwan, India, South Korea, Australia  
 Viewed regional channel TV yesterday and Not viewed any regional channel TV in past month

## THE AFFLUENCERS...

INDEX	WATCH	REGIONAL TV		DONT WATCH
	WORKED ON INTERNATIONAL BUSINESS STRATEGIES	<b>131</b>	>	51
	LOBBIED OR ADVISED MEMBERS OF NATIONAL OR LOCAL GOVERNMENT	<b>128</b>	>	48
	INVOLVED WITH ENVIRONMENTAL / CONSERVATION GROUP	<b>132</b>	>	53
	RAISED CAPITAL, INVESTED FUNDS FOR MY COMPANY	<b>131</b>	>	52
	TAKEN EXECUTIVE DECISIONS WHICH AFFECT ORGANISATION'S OPERATIONS IN OTHER COUNTRIES	<b>131</b>	>	55

Source: Ipsos Affluent Asia Survey H1 2021  
Average Base Index: 100.  
Reported markets: Thailand, Hong Kong, Indonesia, Malaysia, The Philippines, Singapore, Taiwan, India, South Korea, Australia  
Viewed regional channel TV yesterday and Not viewed any regional channel TV in past month

## AFFLUENT VIEWERS STRONGLY AGREE THAT...

INDEX	WATCH	REGIONAL TV		DONT WATCH
	PEOPLE OFTEN ASK MY ADVICE ABOUT FASHION AND WHAT THEY SHOULD WEAR	<b>117</b>	>	74
	I REGULARLY MAKE THE EFFORT TO INVESTIGATE A COMPANY'S ENVIRONMENTAL OR SOCIAL RECORD	<b>117</b>	>	77
	PEOPLE OFTEN ASK MY ADVICE ABOUT FINANCIAL ISSUES AND INVESTING	<b>114</b>	>	75
	I AM ALWAYS ONE OF THE FIRST TO HAVE TECHNOLOGICALLY INNOVATIVE PRODUCTS	<b>116</b>	>	78
	I VALUE THE ELEMENTS OF HIGH QUALITY AND EXCLUSIVITY AS DEMONSTRATED BY LUXURY PRODUCTS	<b>114</b>	>	79

Source: Ipsos Affluent Asia Survey H1 2021  
Average Base Index: 100.  
Reported markets: Thailand, Hong Kong, Indonesia, Malaysia, The Philippines, Singapore, Taiwan, India, South Korea, Australia  
Viewed regional channel TV yesterday and Not viewed any regional channel TV in past month

## NETTING DEFINITION OF REGIONAL TV CHANNELS

### REGIONAL NEWS

Al Jazeera English  
 Arirang TV  
 BBC World News  
 CNBC  
 CNBC TV 18  
 SBS-CNBC  
 CNN  
 CNN Indonesia  
 CNN Philippines  
 CNN News18  
 Bloomberg  
 CNA  
 Euronews  
 Fox News  
 NHK WORLD-Japan  
 Phoenix InfoNews  
 RT Channel

### REGIONAL SPORTS

Eurosport  
 Fox Sports  
 Fox Sports 2  
 Fox Sports 3  
 Star Sports  
 Star Sports 2

### REGIONAL DOCUMENTARIES

Animal Planet  
 BBC Earth  
 Discovery Channel  
 Discovery Science Channel  
 History Channel  
 National Geographic Channel  
 Nat. Geo Wild

### REGIONAL MOVIE & TV SERIES

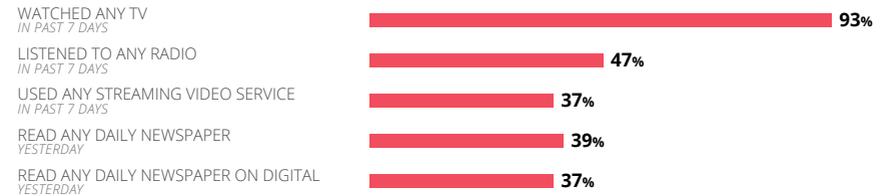
BBC First  
 AXN Asia  
 FOX  
 FOX Life  
 FOX Movies  
 HBO  
 StarWorld  
 Star Movies  
 STAR Chinese Movies  
 Warner TV

### REGIONAL LIFESTYLE

BBC Lifestyle  
 Asian Food Network  
 Food Network  
 HGTV  
 Nat Geo People  
 TLC

**Ipsos Hong Kong** began the Affluent Asia tracking survey over 20 years ago because we knew from the beginning the affluent is one of the most sought-after audiences in this fast growing Asia Pacific region. The affluent represents a group of premium consumers who drive spending, take up new technology and experience, and influence on their peers. Media publishers, agencies and advertisers rely on Affluent Asia to analyse their target customers, in order to capture the share of wallet as well as share of mind of this critically important group.

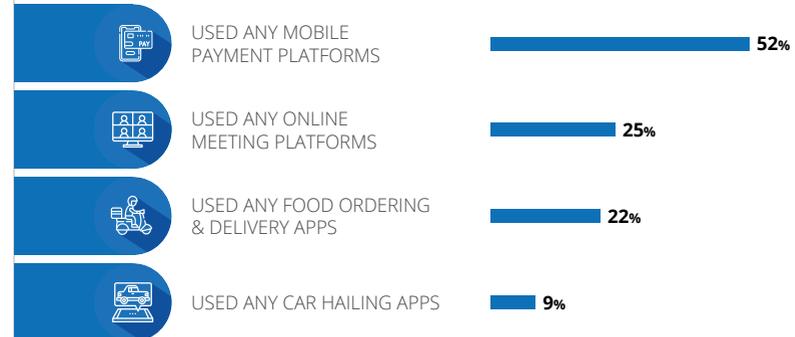
## MEDIA CONSUMPTION



Source: Ipsos Media Atlas Q3 2020 - Q1 2021. Reported market: Hong Kong

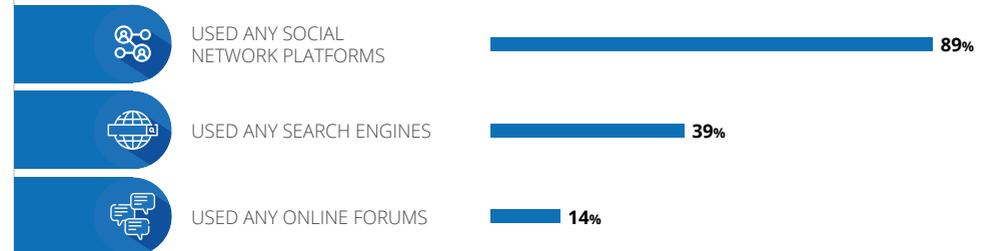
## DIGITAL LIFESTYLE

### USAGE IN PAST 30 DAYS



Source: Ipsos Media Atlas Q3 2020 - Q1 2021. Reported market: Hong Kong. Usage in the Past 30 Days: Netting of 6 major brands of mobile payment platforms / Netting of 3 major brands of online meeting platforms / Netting of 3 major brands of food order & delivery apps / Netting of 4 major brands of car hailing apps.

### USAGE IN PAST 7 DAYS



Source: Ipsos Media Atlas Q3 2020 - Q1 2021. Reported market: Hong Kong. Usage in the Past 7 Days: Netting of 9 major brands of social network platforms / Netting of 5 major brands of search engines / Netting of 6 major brands of online forums.

**Ipsos Hong Kong** began the Media Atlas syndicated survey over 15 years ago and it has been a barometer of cross-media consumption and people's lifestyle of the city. More recently Media Atlas has gone through a major overhaul with a renewed focus to serve the print publishers, where many have been extending their presence from paper to the digital space.

## ASIA-PACIFIC MARKET OVERVIEW

### AUSTRALIA

Following Covid-19, online usage has taken over as the media type consumed most in a week by Australians. Previously, Free-To-Air (FTA) television was the top channel viewed by Australians for an average of 21 hours weekly – this has fallen to 18 hours weekly. In contrast, online usage has risen from 19 hours weekly to 21 hours weekly.

Mobile has seen a rise as the main device for online access, while access from desktop & laptop has reduced. 39% of Australians mainly access online from their mobile, up from 23% last year. Australians of all ages are dual screening more – 1/3 watch TV & access online at the same time on a daily basis.

Content consumption is the top online activity – 63% of Australians have watched videos online in the past month – an 8% point increase from last year. Australians continue to be Paid Streaming TV viewers, however overall subscription has seen a drop from 67% to 61%. This is driven by over 55s, who saw a sharp drop in subscription numbers. In contrast, younger Australians are subscribing more. Netflix dominates with 72% of people paying for the service, however Amazon has seen the biggest growth, jumping from 15% to 27%.

Source: Nielsen CMV (Dec 2020 – May 2021, Dec 2019 – May 2020, All People 14+)

### HONG KONG

As Hong Kong's Covid-19 situation improved, local citizens could finally look at steering their lives back to normal. As people became increasingly comfortable to go out of their homes to shop and dine as they used to (while taking precautionary measures such as wearing a mask), media reach for the year up to June 2021 in general reported a decline compared to the previous year up to June 2020. 95% of local citizens aged 12 to 64 had accessed the Internet yesterday, down 1% from a year ago. TV and Newspapers also reported a drop in reach but it was rather insignificant (-2% and -1% respectively). The drop in reach for media types such as Magazines (-4%) and Radio (-6%) was more prominent.

Average time spent for individual media types had gone up – the Internet (+8 minutes), TV (+8 minutes) and Magazines (+34 minutes). Increase in internet time spent was mostly driven by those aged 45 and above, with their internet time spent increasing from 226 minutes to 245 minutes within a year. This was likely to be a result of the pandemic where people in mature age groups became more receptive to digital media consumption.

Source: Nielsen MI

### INDONESIA

In Indonesia, the overall incidence of linear TV viewing has started to decline to 86% in June this year (vs 94% 2 years ago) while internet is growing significantly to 73% driven by the pandemic. Due to more in-home activity in last 1.5 years, Radio and Print also see growth though at a more modest level. Fantastic growth is detected for Online Video Access (187% growth vs last year), accessing Online News (128% growth) and Music Streaming (108% growth). A big chunk of 75% of active internet users usually play with their gadgets while watching TV.

It is also interesting to see how our Ad Intel data captures the different priorities change from time to time since the start of the pandemic. In Q2 last year, it was the Pharma category (+21%) and also Office Equipment (+52%) that grew their spending. In Q3 2020, the Courier Service category grew their Ad spend by 77% as people demand more home deliveries for almost everything. In Q4 last year, the Telemedicine and eWallet category grew their spend by 239%. In the first half of this year, we see the Financial and Banking segment increase their Ad spend by 75% to capture extra cash from those who still earn well during this pandemic and also expand their investment portfolio.

Source: Nielsen TAM and Ad Intel

### JAPAN

Total Ad spend in Japan fell 11% year-on-year due to the impact of Covid-19. While TV Ad spend (¥ 1,656 bn)

fell 11%, Digital Media Ad spend grew 6% to ¥ 2,229 bn.

Source: Dentsu Inc.

Due to Stay Home measures, the use of Subscription Video On Demand (SVOD) expanded in all age groups, and it has continued to be used thereafter. In 2020, 30% of Internet users were using SVOD, yet by 2021, it increased to 36%. Netflix's Korean Drama Series became a hot topic in 2020, and the demand for Korean Drama Series is growing. Number of those who watch VOD services on TV screens has increased, many citing that it brings more satisfaction to watch on the big screen. More than half of users watch SVOD for more than an hour a day, increasing by 15 points from last year.

Source: Nielsen NetView

### MALAYSIA

The overall Ad spend in Malaysia increased by 21% from Jan - Jun 2021, compared to the same time last year. Whilst month on month Ad spend increased from February to April 2021, there were dips in May & June, due to the implementation of the Movement Control Order (MCO). However, despite these more recent declines, Ad spend was still higher than compared to the same time last year, even when the interstate travel ban was loosened for a few months.

Although digital advertising is increasing momentum, the Ad spend has decreased by 8% compared to the same time last year. Whilst traditional media like Radio and In-store show positive growth,

Newspapers and Magazines advertising expenditure continues to decline. As a result of being closed for the majority of the year, Cinema Ad spend declined by 83%.

Year to date, the Government of Malaysia has spent about RM757m on advertising which makes them the top advertiser at the moment.

Nationwide TV Viewing has increased by 21%, as people are staying at home and total Ad spend has also increased by 35% compared to last year. The launch of two new TV Stations, Awesome TV and TVS, has increased the variety of TV broadcasting scenes and options for viewers.

Internet penetration continues to increase, resulting in greater online activities. Significant growth can be seen in internet activities such as News Consumption (+14%), Gaming (+8%), Online Banking (+12%), E-commerce (+16%).

Source : Nielsen TAM, CMV and Ad Intel

## MYANMAR

Given its political crisis & the third wave of Covid-19 in Myanmar, Ad spend significantly softened in H1-2021 compared to the same period last year. In the early months of the political crisis, in March and April, the Ad spend declined drastically and the TV landscape declined as well. But it is slowly recovering starting with TV and Radio from July onwards, whereas Print and Newspaper Ad spend continue to be challenged.

Although overall Ad spend softened in H1-2021, some categories like "Face Care, Vitamins, Commercial Fertilizers" show significantly increasing spending across Nielsen Media Myanmar's monitored medium.

As mentioned above, the TV landscape had declined in March and April owing to the political situation and it started to go back to normal at the end of May. This improvement seems to be continuing in the upcoming months as well.

Radio Monitoring services launched in Myanmar on 1-Jan-2021 in order to expand Myanmar's product portfolio this year, which also gives the market a more comprehensive view of Ad spend activities in the market.

Source : Nielsen Myanmar TAM (6 cities, aged 4+) and Ad Intel

## NEW ZEALAND

Overall Ad spend increased by 33% in the first half of 2021 compared to same time last year (Jan-June 2020), in particular, Ad spend for Television (+28%), Radio (30%), Newspaper (14%), Outdoor (+40%), Cinema (+64%), and Online/Digital (+130%). This was attributed by a notable rebound in Ad spend after stringent Covid-19 lockdowns implemented in the first half of 2020, and enhancements to Nielsen Ad Intel Digital data (i.e. including social and in-app Ad spend) as of June 2021.

The launch of WizzAd and Nielsen Ad Intel Digital data to New Zealand's product portfolio this year gives the market a more comprehensive view of digital advertising activities in the market.

Although New Zealanders spend an average 2 hours 53 minutes online at home, 49% of New Zealanders still tune in to watch broadcast TV and spends nearly 2 hours on an average day, albeit a year-on-year decrease (55% of New Zealanders 5+, averaging 2 hours 23 minutes viewing per day).

Other media consumption in Q1 2021 remains positive compared to the same time last year. Daily Newspaper readership now stands at 50% per week (45% in 2020), Magazine readership holding well at 66% (was 68%) despite a number of major titles ceasing in 2020, 68% Outdoor Observers (from 62% in 2020), and Radio staying steady with 84% listeners in a typical week. The only exception would be Cinema Attendance, with a notable decrease from 57% to 37% today.

Source: Nielsen TAM (All People 5+), CMI (All People 15+, Q1 2020/Q1 2021) and Ad Intel

## PHILIPPINES

A year after the Covid-19 pandemic started and broadcasting giant ABS-CBN shut down, the Philippines media landscape is seeing a rebound and repositioning. While total Philippines TV ratings decreased from 17.6% in Q2 2020 to 13.3% in Q2 2021, many channels actually saw an uplift year on year, led by GMA (5.8% to 6.2%) and bolstered by TV5 as well as rebranded and new channels such as GTV, A2Z, Heart of Asia, and the Kapamilya Channel. Amidst all this, internet usage continued to increase, jumping from 79% to 87% and radio going from 49% to 52% year over year. Overall Ad spend on traditional media

has gone up 41%, with the number of spots growing 63%, with 9 of the top 10 advertisers increasing their spend from the past year and 18 out of the top 50 brands in Q2 2021 having not advertised at the same time last year.

Source: Nielsen TAM (National, All People 2+, Q2 2020/Q2 2021), CMV (National Urban, All People 10+, Q2 2020/Q1 2021) and Ad Intel

## SINGAPORE

Overall Ad spend in Singapore bounced back in the 1<sup>st</sup> half of 2021, recovering from the H1 2020 decline by 41% and even surpassing H1 2019 pre-pandemic Ad spend by 10%. This is largely due to the recovery of Radio, TV, Outdoor and Digital advertising investments in 2021; whereas Print and Newspaper Ad spend continue to be challenged.

The top growing Ad spend categories include: Telecommunication, Retail, Banking & Investments, and Pharmaceuticals (especially Vitamins / Multivitamins and Supplements). Whisky Ad spend in particular were minimal in 2019 and 2020, however subsequently boomed in H1 2021 (12x the investments of previous years) largely to an influx in outdoor advertising investments. This is coupled with a rise in the number of weekly whisky drinkers from 2019 to 2020. Stay at Home friendly categories such as Televisions and Home Electrical appliances witnessed advertising investments surpassing that of pre-pandemic years (by 13x and 16% respectively). Whereas unsurprisingly in Singapore, where leisure travel is still heavily regulated, Hotel and Airline Ad spend have continued to decline in 2021.

Additionally, the frequent lockdowns implemented in Singapore throughout 2021 have impacted F&B and Fitness Centers significantly; resulting in both categories reducing Ad spend year on year since 2019.

Source: Nielsen Ad Intel

## SOUTH KOREA

Although Covid-19 is still spreading in the first half of 2021, TV viewing time decreased by 5% compared to the same period in 2020. This is because of increased external activities due to prolonged Covid-19. Meanwhile, the TV commercial market has grown the most in the last four years, recovering to pre Covid-19 levels. This growth has continued since the third quarter of 2020.

PC users are increasing 4% more than last year because of online schooling for the teen segment. Mobile users are slightly increasing but time spent is hugely increasing by 9%. Mobile time spent has increased mainly among users in their 40s and older. OTT services such as YouTube, Tving, Netflix and Wawe has driven the growth of mobile usage.

Source: Nielsen TAM & Mobile Panel.

## TAIWAN

Total traditional Ad spend of 1<sup>st</sup> half of 2021 is -2% vs same period last year. The key reason is some of the media have decided to leave the Taiwan market, e.g. CTi News channels, ESPN, FOX Sports, Apple Daily. The impact of Covid-19 and government regulations bring impact

to the traditional media landscape. In digital media, we are seeing single digit: 5 % growth vs same time last year. But the lockdown in mid May caused a huge impact for both digital and traditional media, both show -5% and -15% declines and recovery is dependent on the lifting of restrictions.

Audiences spend more time than ever on linear TV due to lockdown, the average time spent is growing 5% vs same period last year. News channels in particular are getting high ratings and seeing growth in every audience segment. SVOD/AVOD are seeing 9% growth in terms of viewing hour and 4% growth in reach.

Source: Nielsen TAM, MI and Ad Intel

## THAILAND

Despite numerous challenges brought by the Covid-19 pandemic, both personally and professionally, there is also a significant shift in consumer behaviour towards media consumption.

97% of Thai consumers said they watch TV in the past seven days, decreasing -2% from 2020, and that they spend the majority of their free time watching TV. Nevertheless, TV audiences have significantly shifted their traditional TV consumption to online platforms (44%, +46%), both live and catch-up. YouTube, Facebook, and Line TV are the leading platforms for online TV, while more consumers have also accessed BVODs, especially Bugaboo TV and CH3 Plus.

The pandemic has accelerated internet consumption from 71% in 2020 to 78% in



2021, mainly because the rural living and older generation felt it necessary to use the internet during the lockdown. Line, Facebook, and YouTube, respectively, are the platforms Thai consumers use the most on the internet, with 100% of them using a mobile phone to access. Since April 2021, several advertisers have increased their media activities mainly on TV and the internet, contributing

the outlook to surpass the same period in 2020. Food/Beverage, Personal Care/Cosmetics, Media/Marketing, and Automotive remain the highest industries by Ad spend. At the same time, Household and Electrical products use this opportunity of stay-at-home culture to advertise more.

Source: Nielsen CMV and Ad Intel

**NIELSEN HOLDINGS PLC** (NYSE: NLSN) is a leading global data and analytics company that provides a holistic and objective understanding of the media industry. With offerings spanning audience measurement, audience outcomes and content, Nielsen offers its clients and partners simple solutions to complex questions and optimizes the value of their investments and growth strategies. It is the only company that can offer de-duplicated cross-media audience measurement. Audience is Everything™ to Nielsen and its clients, and Nielsen is committed to ensuring that every voice counts.

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MILLION PAY-TV SUBSCRIBERS

3.6

BILLION BROADBAND SUBSCRIBERS

IN ASIA-PACIFIC

73%  
INDIA  
129.2 Million  
699.8 Million

22%  
THAILAND  
4.7 Million  
92.0 Million

50%  
VIETNAM  
12.6 Million  
92.2 Million

38%  
MALAYSIA  
2.9 Million  
43.6 Million

46%  
SINGAPORE  
0.7 Million  
9.0 Million

13%  
INDONESIA  
6 Million  
281.8 Million

23%  
AUSTRALIA  
2.2 Million  
33.9 Million

72%  
CHINA  
445.5 Million  
1883.5 Million

72%  
HONG KONG  
1.9 Million  
26.6 Million

80%  
TAIWAN  
6.9 Million  
34.4 Million

33%  
PHILIPPINES  
7.7 Million  
89.7 Million

100%  
SOUTH KOREA  
36.6 Million  
88.8 Million

23%  
JAPAN  
11.7 Million  
234.1 Million

34%  
NEW ZEALAND  
0.6 Million  
8.5 Million

**FAST FACTS\***

POPULATION .....	3,570,900,000
TOTAL HOMES .....	1,038,500,000
TELEVISION HOMES .....	860,900,000
Pay-TV PENETRATION * .....	63%
Pay-TV SUBSCRIBERS .....	669,000,000
BROADBAND SUBSCRIBERS .....	3,617,800,000

\* Includes subscribers to multiple platforms

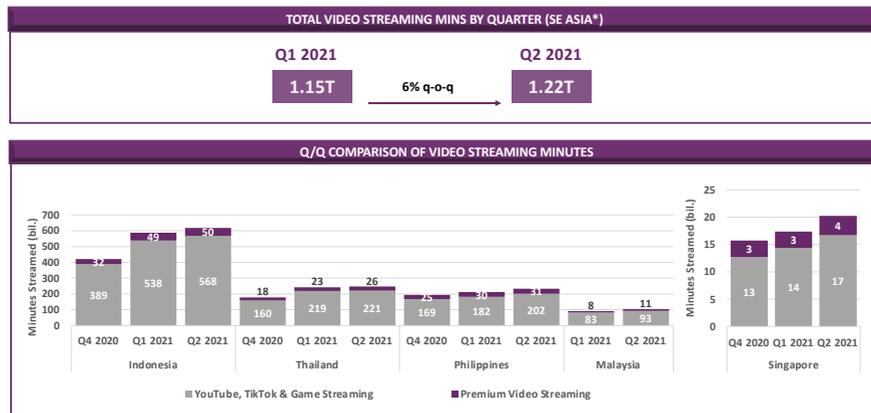
1. Percent of Pay-TV penetration and Pay-TV subscribers  
2. Free-to-Air satellite subscribers are excluded from numbers above  
3. Based on 14 selected markets

Source: Media Partners Asia  
Note: Total broadband subscribers include mobile broadband users and fixed broadband households

# ROBUST VIDEO STREAMING CONSUMPTION IN SOUTHEAST ASIA

**KEY HIGHLIGHTS FROM AMPD Q2 2021 REPORT TITLED "SOUTHEAST ASIA ONLINE VIDEO CONSUMER INSIGHTS AND ANALYTICS: A DEFINITIVE STUDY"**

## GROWTH IN STREAMING MINUTES



\* Aggregated data across five markets – Indonesia, Malaysia, Philippines, Singapore, and Thailand.  
 Note: Malaysia AMPD measurement began in Q1 2021.  
 Source: AMPD Research

### Rising consumption

Southeast Asia (SEA) online video consumption measured across AVOD, SVOD, freemium and game streaming platforms topped 1.2 tn minutes in Q2 2021, growing 6% Q/Q. YouTube continues to lead online video with 65% share of total minutes streamed and 216 m monthly active users (MAUs) across Indonesia, Malaysia, Philippines, Singapore and Thailand. TikTok continues to chip away at YouTube's lead, with a 23% share of total minutes, up from 21% in Q1.

### Premium video platforms captured 10% of total online video consumption in SEA, led by Netflix with 40% share

Regional freemium platforms Viu (18%), WeTV (12%) and iQIYI (9%) remain strong along with local platforms such as Vidio in Indonesia. Disney+/Disney+ Hotstar captured 3% of viewership, with growing engagement in Indonesia and Singapore and freshly launching in Malaysia and Thailand in June 2021.

### SVOD category expansion

The total Southeast Asia SVOD subscriber base reached 29.6 m at end-Q2 2021, adding over 10 m new subscribers over 1H 2021. Disney leads SVOD growth, adding 3.6 m new paying subscribers in 1H 2021. Disney+ Hotstar benefited from a strong launch in Thailand by leveraging low-cost early bird pricing through AIS. In Malaysia, Disney had strong initial subscriber uptake after launch on June 1. Subscriber growth has since slowed as Astro faces resistance among its pay-TV base to leave the pay-TV ecosystem in order to stream Disney+ Hotstar on a separate app. The integration of Disney+ Hotstar into Astro's Ultra and Ulti boxes is likely to ease friction issues for new users and boost uptake. Activation issues (through Astro), and user dissatisfaction around platform accessibility have also dampened early growth. Managing churn will be critical in 2H as Disney manages content cadence and customer satisfaction across SEA.

**Viu** has made significant strides in 1H, adding 1.9 m new subscribers and overtaking Netflix's #2 ranking with a total 5.2 m paying subs in SEA. Subscriber growth was most pronounced in Indonesia, Philippines and Thailand with aggregate net additions in these markets of 1.6 m in 1H. Viu had 35 m MAUs in Southeast Asia at end-Q2 2021. While Viu's paying subs base continues to expand, consumption growth across its free tier has helped to renew demand from key ad categories.

### Future SVOD category growth as:

- (1) Disney+ Hotstar grows further in Thailand where it continues to gain momentum through August, while

- (2) Netflix and Viu continue to grow in key markets driven by premium Korean and US content;
- (3) Local platforms Vidio, Mola TV and Sooka gain further momentum with the return of live sports, and;
- (4) Chinese platforms iQIYI and WeTV each cross the 1 m paying subs mark by tapping into their aggregate 38 m MAU base.

### Operator-owned authenticated platforms remain important in the region, contributing an aggregate 6.7 m subscribers.

Thailand's TrueID (2.6 m) and AIS Play (1.4 m) lead, providing True and AIS pay-TV/broadband customers with low-cost or bundled access to online video. Both platforms also have some direct uptake. In Indonesia, MNC's Vision+ has 1.8 m subscribers, largely authenticated MNC Vision pay-TV subs with some direct uptake. Vision+ aggregates live FTA channels and catch-up, pay-TV channels, Hollywood and Asian movies and series, and kids content.

### Premium US and Korean content drives subscriber acquisition across SEA,

while Japanese anime and long-tail Korean dramas have become ubiquitous across free tiers as reliable drivers of consumption. Local content drives ~20% of consumption in Indonesia and Thailand, with Viu, iQIYI, WeTV, Vidio and Line TV all streaming local FTA dramas on AVOD. Use cases for local content in driver subscriber acquisition are emerging. Netflix's Thai original *Girl From Nowhere* has taken off in Thailand

and wider SEA, while Vidio's originals (Scandal, Turn On) track well in Indonesia, anchoring subscriber adoption together with live sports. Premium Chinese content consumption has taken hold in Thailand, driven by the popularity of WeTV and iQIYI's romance and period dramas and variety/reality shows.

## METHODOLOGY

This report is produced by Media Partners Asia (MPA) using its proprietary AMPD Research platform. AMPD used two key tools to conduct research & frame analysis:

### I. PASSIVE MEASUREMENT

The AMPD Vision@ platform uses a permission-based panel of consumers who consent to the collection of their session-based activity.

For this report, the platform passively measured real consumption on mobile devices across 5 Southeast Asia markets in Q2 2021. Sample sizes by market are Indonesia, N=1,409; Malaysia, N=1,281; Philippines, N=1,325; Singapore, N=401; Thailand, N=970.

The data reported is anonymized and conforms to data privacy legislation in markets where the service operates including European Union's General Data Protection Regulation (GDPR) and the Republic of Singapore's Personal Data Protection Act (PDPA) which delivers parallel compliance in Asia Pacific Economic Cooperation (APEC) member states. AMPD Vision@ was used by MPA to provide a consolidated granular view of streaming media consumption across global and regional VOD services on mobile devices. Data from AMPD Vision@ informs key metrics reported in this

study including streaming minutes & consumption share by platform, genre and country of origin.

### II. CONSUMER SURVEY

MPA used the results of a Consumer Survey, which serves as a VOD Profiling Study conducted continuously across Indonesia, the Philippines, Singapore and Thailand. Data is collected through an interactive online survey among internet users aged 15 years and above who use both mobile and/or home broadband.

Respondents are sampled according to representative quotas for age, gender and regions corresponding to AMPD Research's online universe estimates modelled using official government

statistics and MPA analysis. The samples are sourced using AMPD Research's proprietary online panels, pre-screened for actual VOD consumption. For this report, a sample size of 24,590 respondents completed a structured survey of mostly closed-ended questions.

Sample sizes by market are Indonesia, N=6,054; Malaysia, N=8,519; Philippines, N=3,631; Singapore, N=304; Thailand, N=6,082. Data from the Consumer Survey informs key metrics reported in this study including:

- (1) Socio-economic & demographic indicators by VOD platform;
- (2) Consumer spend on VOD services; and
- (3) Paying subscribers by VOD platform. ■



by **Anthony Dobson**  
MD, AMPD Research

**Media Partners Asia (MPA)** is the leading independent provider of research, advisory and consulting services across media, telecoms, sports and entertainment industries in Asia Pacific. We provide customized research with strategic recommendations to help clients launch new products & services, enter new markets, as well as acquire and sell businesses. MPA reports are used and sourced by local, regional and global companies for strategic planning and equity & debt transactions. We also offer dedicated primary research through subsidiary AMPD Research to measure consumer behaviour across the digital economy, including online video and gaming. MPA also hosts the APOS Summit, the defining voice and global platform for the Asia Pacific media, telecoms, sports and entertainment industry.

# THE GLOBAL MEDIA LANDSCAPE ANALYZING HOW THE PANDEMIC HAS CHANGED MEDIA HABITS

In our contribution to last year's report, we discussed some of the early implications of Covid-19 and lockdowns, which were beginning to become clear in our research. Based on the trends we saw at the time, we felt confident enough to make a series

of predictions about what the next year would look like

12 months down the line, we can revisit those predictions, and bring to light some new trends.

## Time spent watching online/linear TV

Average daily time spent watching online/linear TV (h:mm)



- ? On an average day, how long do you spend watching television/online TV?
- 📊 GWI Core 2012-2021 (averages of waves conducted between Q4 2012-Q1 2021)
- 👤 682,344 APAC internet users aged 16-64

**Prediction:** New online TV viewers will stick around  
**Prediction:** Hours spent watching online TV will match or surpass broadcast

In 2021, time spent watching online TV is now effectively neck-and-neck with broadcast in the Asia Pacific region.

Not only that, but the pandemic has greatly expanded the audience of digital TV viewers. The number who say they "never" use streaming services has dropped 26% year-on-year.

By analyzing each quarter of 2020 in detail, we can get a measure of how media consumption changed as Covid-19 entered the scene. Q2 2020, our first "post-Covid" wave of research, saw big spikes in media consumption across the board, with online TV no exception. This fell back in the second half of the year but is beginning to rise again.

## Online TV thriving in countries without strict lockdowns

Average daily time spent watching online TV (h:mm) in..



- ? On an average day, how long do you spend watching television/online TV?
- 📊 GWI Core Q4 2019-Q1 2021
- 👤 320,311 APAC internet users aged 16-64 | 9,914 internet users in Taiwan aged 16-64 | 6,039 internet users in New Zealand aged 16-64

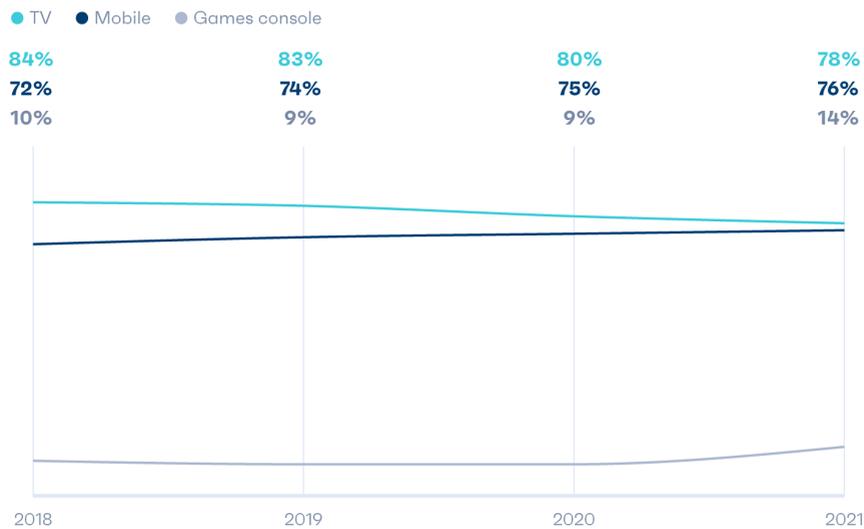
It's important not to assume that lockdowns are the main driver behind more time spent watching online TV. Two of the markets with the biggest growth in that area are Taiwan and New Zealand, which in 2020 both avoided the kind of lengthy lockdowns experienced by many countries around the world. Based on the historical trend, we expect time spent watching online TV in Asia Pacific to eventually increase beyond even the level

we saw under "peak lockdown" in Q2 2020.

While it's easy to think of extra minutes spent watching online TV coming at the expense of broadcast, they're not binary opposites. The number of people who never watch online TV has dropped, but the number who never watch broadcast hasn't changed, and it remains a minority of viewers who turn off completely.

## Mobile nearing TV as most popular device

% of internet users in APAC watch any type of TV on the following devices



? In the past month, which devices have you used to do the following?  
 🗄️ GWI Core 2018-2021 (averages of waves conducted between Q4 2018-Q1 2021)  
 👤 476,504 APAC internet users aged 16-64

**Prediction:** Smartphones will grow as a way to watch streaming services

One of the key findings in our research since Covid came onto the scene has been the enduring power of the smartphone, proving itself to be much more than just an on-the-go device. Even when spending more time at home, with PCs, games consoles and TVs all available alternatives, smartphones have grown as a go-to for video content.

Just as online TV is approaching parity with broadcast TV for hours consumed per day, so too is mobile bearing down on TV sets as the primary device through which any kind of TV is watched.

It's important to contextualize how this is happening though. The amount of live

TV watched through smartphones hasn't changed since 2019; the increases are due to consumers watching more subscription content on their phones. In the last year we've also seen a big spike in the number of viewers using their games consoles to watch TV. PCs, meanwhile, continue to lose relevance as a way in which to tune in.

And just as other devices are becoming more used as TVs, so too are TVs beginning to resemble other devices. Use of TV sets to access the internet is up 19% in the region since 2019. This indicates at the very least greater consumer comfort with smart TVs and the range of experiences they offer, with viewers doing more than just pressing play.

## Top 5 online video services by market

▲ Fastest growing service

<b>Australia</b> Netflix YouTube Amazon Prime Video Disney+ 7plus ▲ Amazon Prime Video	<b>China</b> iQiyi Youku MangoTV Sohu Tencent Hollywood VIP ▲ YOU On Demand	<b>Hong Kong</b> YouTube Viu Netflix myTV Super Youku ▲ Apple TV+	<b>India</b> YouTube Netflix Amazon Prime Video Hotstar Sony Liv ▲ Amazon Prime Video
<b>Indonesia</b> YouTube Netflix Viu iFlix YouTube Premium ▲ Apple TV+	<b>Japan</b> YouTube Amazon Prime Video Abema TV Netflix Nicovideo ▲ Amazon Prime Video	<b>Malaysia</b> YouTube Netflix Viu iFlix Astro on the go ▲ Amazon Prime Video	<b>New Zealand</b> Netflix YouTube TVNZ Disney+ Neon ▲ Neon
<b>Philippines</b> YouTube Netflix iWantTV Viu iFlix ▲ Viu	<b>Singapore</b> YouTube Netflix Toggle Viu YouTube Premium ▲ Amazon Prime Video	<b>South Korea</b> YouTube Netflix Olleh TV YouTube Premium Tving ▲ Netflix	<b>Taiwan</b> YouTube iQiyi Netflix Line.me TV Gamer.com.tw ▲ KKTV
<b>Thailand</b> YouTube Netflix cH7HD Line.me TV WeTV ▲ WeTV	<b>Vietnam</b> YouTube Netflix YouTube Kids YouTube Premium iTunes ▲ Apple TV+	? In the last month, which of these services have you used to watch/download TV shows, films or videos? 🗄️ GWI Core Q1 2021 👤 74,434 APAC internet users aged 16-64	

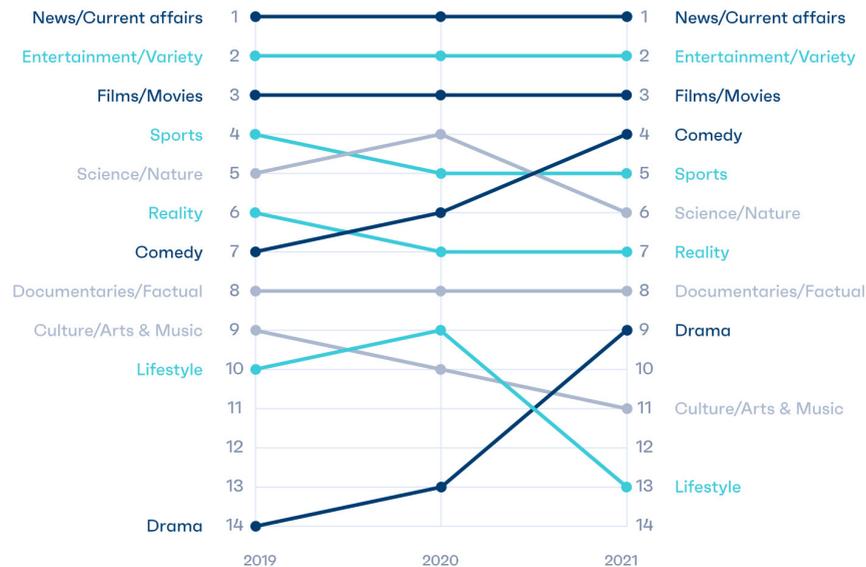
Last year we highlighted how Netflix holds the crown among streaming services in APAC, and in 2021 it ranks above even YouTube in Australia and New Zealand for video consumption. Disney+ is making inroads in English-speaking markets as well, though we should point out this research was conducted before it was released in Malaysia or Thailand.

But other services are rising through the ranks. Amazon Prime Video is climbing the leaderboard in many markets, while Apple TV+ is also challenging in Hong Kong, Indonesia and Vietnam.

Viu's freemium model has made it a contender, particularly in Hong Kong where it occupies second place behind YouTube.

## Top TV genres

Rank in popularity of the following TV genres among APAC viewers



- ? In a typical week, which of these genres will you have watched on television?
- 📊 GWI Core 2019-2020 (averages of waves conducted between Q3 2019-Q1 2021)
- 👤 361,438 internet users in APAC aged 16-64

**Prediction:** Sports and culture programming will need to work hard to retain viewers

As we anticipated, a lack of sports action has seen it fall down the leaderboard of the most popular TV genres. But the fall for cultural programming has been even more stark. Drama and comedy have benefited in their stead, perhaps because they offer the best forms of escapism during a pandemic.

The reasons for cultural programming's fall in popularity can be gleaned from our

personal interests data. Compared to 2019, consumer interest in areas like film, theater, photography and even books have all decreased significantly. Whether it's due to restrictions on galleries, museums and other cultural spaces, or just a shift in life priorities, dwindling popularity for cultural topics is reflected in the region's TV diet.

## OUR PREDICTIONS FOR THE NEXT 12 MONTHS

- At the time of writing, the Delta variant looks likely to lead to more lockdowns in the region. These may have some effect on boosting minutes watching online TV, but even without these interventions minutes spent watching online will continue to rise. It's unlikely that the "peak lockdown" viewing figures from 2020 are the limit of how much online TV can grow.
- Netflix will remain the market leader for streaming services but it will be challenged in more countries, particularly by Amazon Prime Video.
- We will see more convergence between ever-smarter TV sets and other devices, as consumers watch more TV from mobile and games consoles, while they also use their TVs to browse the web more.

**GWI (formerly GlobalWebIndex)**  
is the leading supplier of audience  
insight to the global marketing industry.

by **Chris Beer**  
Trends Manager, GWI





# ONLINE GAMING PRIVACY REGULATION IN ASIA PACIFIC

Covid-19 has accelerated growth in the video game industry, with online games specifically (which include massive multiplayer online games (MMOGs) as well as casual and social games that can be either played directly in an internet browser or via clients that need to be installed) expected to generate US\$24 bn in 2021,<sup>1</sup> which is expected to rise more than threefold to US\$79 bn in 2025. <sup>2</sup>The Asia Pacific region is projected to bring in US\$12.7 bn in online gaming revenues in 2021 (more than 50% of global revenues), of which more than US\$5.5 bn will be generated in China.

Video game companies are engaging with gamers around the world who are spending more time at home and interacting with others virtually. But global privacy developments have also prompted video game companies to address heightened compliance obligations that apply to collecting greater amounts and types of data and processing it in novel ways. Other regulatory developments in certain countries (e.g. China) focus on content regulation and restricting access to online games by young people.

The acceleration of change in privacy laws across APAC, a more vigilant public, the enhanced powers of enforcement and

growing scrutiny of the gaming sector among regulators has given rise to a number of compliance issues. Among the key updates to privacy regulations affecting online gaming include:

1. **CHINA** - the Personal Information Protection Law (PIPL) (effective 1 November 2021) has some similarities with the EU General Data Protection Regulation (including data subject rights, extra territorial effect and fines linked to annual turnover for severe breaches), with some notable differences:
  - a. Requires a lawful basis for processing personal information but has no comparable lawful basis to the GDPR's "legitimate interests." Places stronger emphasis on consent for processing
  - b. Restrictions on disclosures to third parties and cross-border transfers of personal information out of China (including mandatory government security reviews in some cases)
  - c. Breaches must be notified "immediately" to the regulator rather than within the GDPR's 72-hour timeframe

2. **THAILAND** - the Personal Data Protection Act (PDPA) (effective 31 May 2021) includes:
  - a. Requirement for a lawful basis for processing (which includes legitimate interests)
  - b. Enhanced data subject rights
  - c. Mandatory notification of data breaches to the regulator within 72 hours
  - d. Requirements for cross-border data transfers (including consent and standard contractual clauses)

3. **SINGAPORE** - amendments to the Personal Data Protection Act (PDPA) (2012) made in 2020 have come into force in stages during 2021, including:
  - a. Mandatory notification of data breaches to the regulator (PDPC)
  - b. Expanded concept of "deemed consent" allowing businesses to use personal data based on notification to individuals where such individuals have not opted out
  - c. Strengthened enforcement powers of the PDPC, including increased financial penalties

4. **OTHER JURISDICTIONS** - personal data protection bills are currently passing through legislatures in India, Indonesia and Vietnam and amendments to existing

privacy rules are currently being debated in Australia, among other countries.

Some of the issues that these changes and evolving privacy laws generates include the following:

- **designing privacy into games from the outset** - the concepts of "privacy by design" and "privacy by default" are becoming more commonplace, even where these concepts are not built into the law
- **integrating technologies and platforms** - some games may draw on personal data from multiple sources, including data from social media accounts, wearable devices, in-game player activity and telemetry from connected devices, as well as web activity tracking technologies such as cookies and beacons, making it even more important for companies to be transparent about their privacy practices
- **protecting children** - game companies often have to make strategic decisions about whether to let children play their games, and then comply with all applicable children's privacy requirements, or use technical measures to block children from playing, and then limit the universal appeal of their games, and the age of majority often differs between territories in APAC
- **privacy issues in digital advertising** - regulators are paying close attention to the privacy issues surrounding the digital advertising industry, including

the use of cookies, profiling and other cross-context behavioural advertising techniques

- **responding to data subject requests** - privacy laws are giving data subjects new or expanded rights, with recent or upcoming developments in China, India, Indonesia and Vietnam (among others)
- **mandatory data breach notifications** - privacy laws are increasingly making the notification of data breaches to the regulator obligatory, rather than voluntary
- **APAC countries** are increasingly seeking adequacy decisions from the EU Commission for the transfer of personal data from the EU to those countries (e.g. South Korea likely late 2021, Japan obtained this in 2019)

These developments mean that privacy is necessarily a foreground consideration for the online gaming industry. As time goes on, we expect regulations to proliferate and develop further, giving rise to more complexity and the need for industry participants to weigh privacy compliance risks carefully in their decision-making.

At Baker McKenzie, we provide the full range of legal services for clients in the interactive entertainment industry, including video game development, publishing and distribution. Our clients benefit from our full-service capabilities and global cross-practice advice, including our media, entertainment, technology, M&A, employment and intellectual property law expertise, as well as ground-breaking experience and the technical skills to provide commercially viable advice. ■

To learn more about our capabilities in this space and how we can help, [click here](#).



by **Dominic Edmondson**

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*We at Baker McKenzie appreciate the challenges of staying innovative and profitable in an increasingly regulated global landscape. Working across borders, we advise providers and users on technology, cybersecurity, data privacy, IP protection, licensing, information management, outsourcing, communications and mobility issues — designing compliance programs to protect critical business interests and using novel structures for new technology offerings. No other law firm has more experience helping clients navigate the legal and commercial risks on the sourcing, use and provision of technology.*



# APAC REGULATORY ROUND-UP: DATA PROTECTION

Recent research conducted by [Check Point Research](#) has revealed that cyberattacks in the Asia Pacific (APAC) region had faced a staggering rate of 168% year on year increase when compared to May 2020. In light of the statistics, it is not surprising to note that the legal landscape for data protection and cybersecurity across the region has either been rapidly implemented or amended to remain effective and relevant.

We set out below a summary of some recent legislative implementations and changes across the region:

## AUSTRALIA

Amendments to the Privacy Act 1988 (Cth) could be afoot as the Attorney-General's Department initiated its [review](#) of the Privacy Act on 30 October 2020, including to consider a scheme intended to satisfy the adequacy requirements imposed by other jurisdictions such as under the APEC Cross-Border Privacy Rules system and the EU under the General Data Protection Regulation.

## CHINA

China published its PRC Data Security Law intending to cover all types of data, although the regulatory focus is on non-personal data. The Data Security Law took effect from 1 September 2021. The PRC Personal Data Protection Law, which is China's first designated personal data law was also passed on 20 August 2021. Containing provisions including requiring

critical information infrastructure or large scale operators to localise personal data collected or generated in China, and data breach notification requirements, the PRC Personal Data Protection Law will take effect on 1 November 2021.

## HONG KONG

The Personal Data (Privacy) Amendment Bill 2021 has been gazetted on 16 July 2021, setting forth the proposed amendments which focused on anti-doxing measures, including to create criminal offences on disclosing personal data without consent that may cause specified harm.

## NEW ZEALAND

On 1 December 2020, the [Privacy Act 2020](#) replaced the Privacy Act 1993 to modernise the framework and better protect its citizens' privacy rights. The Privacy Act 2020 introduced changes including broadening the Privacy Commissioner's powers to investigate complaints and issue notices for breaches of the new Act and requiring businesses to notify a privacy breach that causes harm or is likely to cause serious harm to the individuals affected.

## PHILIPPINES

A [substitute bill](#) to amend the Republic Act 10173 – Data Privacy Act of 2012 is afoot, with the House of Representatives – Committee on Information and Communications Technology approving the substitute bill to amend the Data

Privacy Act on 4 February 2021. Amendments include clarifying the extraterritorial application of the Data Privacy Act to ensure end-to-end protection of the data subjects' information, redefining the scope of "sensitive personal information" to include other data such as biometric and genetic data, and including the performance of a contract as a lawful basis of processing of sensitive personal information.

## THAILAND

The full enforcement of the Personal Data Protection Act B.E. 2562 (2019) is postponed to 1 June 2022, in light of the ongoing third wave of the Covid-19 pandemic in Thailand.

## SINGAPORE

Major amendments were made to the Personal Data Protection Act 2012. The amendments came into effect on 1 February 2021, which introduced amongst others the mandatory data breach notification requirement, and provided various exceptions on business improvement, research and development, and legitimate interests.

## VIETNAM

The full text of the [Draft Decree](#) on Personal Data Protection was released to the public on 9 February 2021 and is expected to take effect on 1 December 2021. The Draft Decree intends to regulate cross-border transfer of data, including to require organisations to obtain the Personal Data Protection Committee's issued written approval for any such transfer. It also restricts the processing of sensitive personal data (political and religious opinions, personal health, genetic, biometric data, etc.) unless the Personal Data Protection Committee approves an organisation's application of such processing.

Businesses should continue to stay aware of the developing legal landscape across the region. As requirements to ensure data protection continually become more stringent, cybersecurity remains a crucial part of ensuring such compliance. This is particularly relevant in the increased adoption of remote working, which widens the attack surface, and in turn may, expose businesses to higher risks of cyberattacks.



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*For any data privacy queries or discussions, please contact any of our CMS experts above.*

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## CHINA'S PERSONAL INFORMATION PROTECTION LAW

# WHAT TO EXPECT?

On 1 November 2021, China's much anticipated Personal Information Protection Law ("**PIPL**") came into effect. The PIPL, Cybersecurity Law and the new Data Security Law (which came into force on 1 September 2021), now form the main legal framework governing data security and the handling of both personal and non-personal data in China.

The PIPL has often been compared with the EU General Data Protection Regulation ("**GDPR**") and while this statement is largely true there are many points of difference between the two regimes.

### Scope and extra-territorial effect

The PIPL regulates the processing of personal information of individuals within China. Personal information is defined as any information relating to identified or identifiable natural persons that is recorded by electronic or any other means, but excluding anonymous data.<sup>1</sup>

The law also expressly applies to any processing activities performed outside China, if such activities are:

- (1) for the purpose of providing products or services to individuals located in China;
- (2) for the purpose of analysing or evaluating the activities of individuals located in China; or

- (3) they fall within any other circumstances specified under local laws or regulations.<sup>2</sup>

All data controllers outside of China who engage in such processing activities, must establish a dedicated entity or appoint a legal representative in China (the details of whom must be notified to the local authority) to be responsible for all matters relating to the processing of personal information under the PIPL.<sup>3</sup>

Unlike the GDPR, which applies to the "offering" of goods or services (i.e. the targeting criteria), the PIPL applies to the processing of personal information for the purpose of "providing" products or services to individuals in China. In the absence of further clarification, the PIPL has the potential of applying to foreign companies that are not specifically targeting individuals in China and might incidentally provide products or services to them.

The responsibility and requirements under the PIPL are mainly imposed on personal information processors (i.e. the equivalent of data controllers under the GDPR). The personal information processor is any organisation or individual that independently determines the purpose and means of processing of personal information ("**data controller**").<sup>4</sup>

Data controllers remain responsible for supervising the entities to whom

they have entrusted the processing of personal information (i.e. the equivalent of a data processor under the GDPR ("**data processor**")), and must enter into agreements with them that include provisions stipulated under the PIPL.<sup>5</sup>

### Grounds for processing

Under Article 13 of the PIPL, data controllers can only process personal information if:

- (1) The data subject has provided their consent;<sup>6</sup>
- (2) The processing is necessary: (a) for the conclusion or performance of a contract to which the data subject is a party; or (b) to conduct human resources management in accordance with labour rules and regulations established by the employer in accordance with the laws or collective contracts signed under law;<sup>7</sup>
- (3) The processing is necessary for the fulfilment of duties or obligations imposed under laws or regulations;
- (4) There is a need to respond to public health emergencies or to protect an individual's life, health or property in an emergency situation;
- (5) The personal information is being processed for the purposes of conducting news reporting, supervising public opinion or other such activities that are in the public interest and the processing is within a reasonable scope;
- (6) The personal information is already publicly available (either disclosed by the data subject or has otherwise legally disclosed), and the processing is within a reasonable scope and in compliance with the PIPL; or

- (7) The processing is permitted pursuant to other laws and regulations.

Notably, unlike the GDPR, legitimate interests is not a grounds for processing under the PIPL.

Regardless of the basis of processing relied on by the data controller, the data controller must still explicitly notify the data subjects beforehand of the purpose of processing, the categories of personal information being handled, the mechanisms in which the data subjects can exercise their rights, and so on.<sup>8</sup> Any changes must be notified to the data subjects.

If consent is being relied on as the basis of processing, then separate consent must be obtained in certain situations (e.g. where personal information will be transferred to a third party, sensitive personal information will be processed or personal information will be transferred out of China, amongst others). What amounts to separate consent has not been defined in the PIPL. It is likely that unbundled and distinct opt-in consent may be required.

### Cross-border data transfers

In line with the Cybersecurity Law and Data Security Law, the PIPL has strict data localisation and cross-border data transfer requirements. Any data controllers that process personal information at a volume exceeding the threshold specified by the CAC, or any CII operators, must store all personal information within China, and can only transfer personal information overseas if a security assessment is conducted by the CAC.

<sup>1</sup>Article 4 of PIPL. <sup>2</sup>Article 3 of PIPL. <sup>3</sup>Article 53 of PIPL. <sup>4</sup>Article 73(1) of PIPL. <sup>5</sup>Article 21 of PIPL. <sup>6</sup>To be valid, the individual must provide their fully informed, voluntary and explicit consent. Where laws or regulations require separate or written consent, then this must be obtained. See Article 14 of PIPL. <sup>7</sup>The legal basis of processing in relation to human resources management is a new legal basis introduced in the final PIPL, which did not appear in the first and second drafts of the PIPL. <sup>8</sup>Article 17 and 18 of PIPL.

For all other data controllers, personal information cannot be transferred out of China, unless it is truly necessary for business or other such requirements, and one of the following conditions are met <sup>9</sup>:

- (1) A security assessment conducted by the Cyberspace Administration of China (CAC) has been passed;
- (2) A security certification is obtained, which is conducted by an accredited body in accordance with regulations specified by the CAC;
- (3) An agreement with the foreign recipient is entered into based on the "standard contract" stipulated by the CAC, which sets out each party's respective rights and obligations, and ensures that the personal information will be protected to the same standard as that provided under the PIPL; or
- (4) The transfer is in accordance with other laws or regulations or other conditions prescribed by the CAC.

Before any overseas transfer can take place, data controllers must also conduct a privacy impact assessment in relation to the cross-border transfers <sup>10</sup> and notify the affected data subjects of the foreign recipient's name and certain other specified information. <sup>11</sup> Where consent is being relied on as the grounds for processing, the data subject's separate consent must also be obtained for the transfer. <sup>12</sup>

It should be noted that data controllers are prohibited from providing personal information stored in China to any foreign judicial or law enforcement agencies, unless prior approval is obtained from the relevant Chinese authority. Chinese authorities will handle any

requests from foreign judicial or law enforcement authorities in accordance with any applicable international treaties or agreements, or in accordance with the principle of equality and reciprocity. <sup>13</sup>

### Other key provisions

Some of the other key provisions introduced by the PIPL include the following:

- (1) Data controllers are prohibited from using automated decision-making that will result in unreasonable differential treatment of data subjects in terms of price or other transactional terms; <sup>14</sup>
- (2) Data controllers must carry out a privacy impact assessment before using personal information for automated decision-making, <sup>15</sup> and data subjects have the right to request an explanation on how the automated-decision was made and to refuse / opt-out of the use of automated decision making; <sup>16</sup>
- (3) Data subjects have the right of data portability, the right to access and correct their data, right to erasure, the right to object and restrict the processing of data, the right to withdraw consent, and so on;
- (4) Additional obligations are placed on data controllers that provide important internet platform services to a large number of users and/ or who operate complex business models, e.g. the need to establish an independent body (mainly consisting of external personnel) to oversee the data controller's processing activities; and

- (5) If any leak, tampering or loss of personal information has or may have occurred, the data controller must immediately deploy remedial measures and notify the relevant local authorities and data subjects. Data controllers can elect not to notify affected data subjects, if they determine that they have taken measures which effectively prevent the data subjects from suffering any harm from the data incident. However, this decision can be overridden by the relevant authority. Note that unlike the GDPR, there is no obligation under the PIPL for data processors to notify their data controllers in the event of any data incident.

Breach of the PIPL can incur administrative fines of up to RMB 50 m or 5% of the data controller's annual revenue in the last year. In addition to fines, other penalties include rectification orders, warnings, confiscation of illegal gains, suspension or cessation of services, cessation of operations or revocation of permits or business licenses, or entering the data controller on a credit list. The local authorities also have the specific

power to take steps against any foreign organisation that is seen as engaging in processing activities that harm the rights and interests of Chinese citizens or which endanger national security or public interest, such as prohibiting Chinese entities from providing any personal information to them <sup>17</sup>. Persons-in-charge and other directly responsible personnel may also be held personally liable.

### Takeaways

While the PIPL resembles the GDPR, the PIPL appears to be one of the world's most stringent personal data protection laws and its far-reaching effect may make it more challenging for companies, especially those with global operations, to ensure compliance. A sharp eye should also be kept out for any further guidelines, measures or regulations likely to be issued by the Chinese authorities to flesh out the implementation of different aspects of the PIPL. ■

*\* This article was written and was up-to-date as of 8 October 2021.*



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<sup>9</sup> Article 38 of PIPL. <sup>10</sup> Article 55 of PIPL. <sup>11</sup> Article 39 of PIPL. <sup>12</sup> Article 13, 14 and 39 of PIPL. <sup>13</sup> Article 41 of PIPL. <sup>14</sup> Article 24 of PIPL. <sup>15</sup> Article 55 of PIPL. <sup>16</sup> Article 24 of PIPL. <sup>17</sup> Article 42 of PIPL.



## EVOLVING CONSUMER TRENDS DRIVING THE SYNERGY OF BROADCASTING AND STREAMING SERVICES

The Asia-Pacific, which has more than half of the world's population, is characterized by its great diversity in economic development and demographic outlook across countries, or even within regions of the same country. This diversity and heterogeneity is a source of dynamism, and yet it presents a challenging landscape for satellite operators and broadcasters to navigate.

### Adapting to changing consumer behaviour

Satellite broadcasting, being a one-to-many transmission system, is widely regarded as the most efficient content delivery method for services over a large region. However, this tried-and-true method comes with certain limitations on customization, despite multiple attempts at enhancing ground technology. In parallel, the evolving urban consumers of today, with their busy social calendars, continue to demand for more flexibility and personalization. As a result, broadcasters turn to the latest evolution of the Internet, mobile networks and devices to provide alternate platforms to address consumer needs. In their pursuit for more profits, they tend to focus on the needs of high average revenue per user (ARPU) customers in developed markets rather than the general populace.

### Audience shift driven by streaming media

Despite Netflix's growing clout in highly

developed markets, only 14% of its 214 million paid subscribers hail from the Asia Pacific region. Nevertheless, its early success has put incumbent broadcasters everywhere on the defensive and anxious for change in order to stay relevant in an increasingly OTT world. This divergent market trend has driven some global content providers to branch off from linear TV to a direct-to-customer model even at the risk of harming their existing subscriber base.

### Satellite broadcast stays strong with advances in technology

AsiaSat believes that the traditional distribution method via cable or satellite remains the most effective means of content delivery. With the adoption of evolving digital satellite transmission standards, compression technologies and practices, cost barriers have significantly reduced for more efficient broadcasting. For example, a typical 36 MHz C-band transponder can deliver three 30Mbps UHD feeds at this year's Tokyo Olympics, compared to only four 17Mbps HD feeds at the last Rio Olympics, which represents an increase in capacity of more than 32%. The key challenge for linear TV is fierce competition from streaming video, particularly in regions with very good terrestrial Internet connectivity. These new streaming services have enabled users to enjoy greater flexibility in accessing various types of content. However, in times of a sudden surge in data traffic such as during Covid lockdown periods, terrestrial



networks have experienced transmission hiccups, and research has claimed that subscriber growth will be stunted by bandwidth limitations.

Thus, for premium live content with millions of viewers, satellite broadcasting will always remain the most reliable and cost effective "macro-level" solution in the years to come.

### Ongoing transformation is key to remaining relevant

With rapid adoption of video streaming, the continued expansion of terrestrial networks and the deployment of 5G networks, consumers in advanced developed markets will continue to shift from linear television to video streaming. The ability to capture customer usage data, enhance revenues and customer stickiness, combined with the rollout of innovative terminals enabling small-to mid-scale micro events to become

commercially viable have created market momentum that will continue to boost demand for more streaming services.

Looking ahead, satellite operators must strive to address both macro and micro customer needs through continual updates of its offerings and selecting the right mix of technology and networks to meet customers' service expectations. While we take the view that there is no better way to serve the macro market than through satellites, the specific needs of the micro segments and divergent consumer behaviours are factors that cannot be ignored. ■

by Roger Tong  
Chief Executive Officer, AsiaSat



*For more than 30 years, ASIASAT has been providing reliable satellite connectivity, media and data solutions to customers through its best-in-class satellite fleet and ground infrastructure. From content distribution to TV platforms and telcos; OU; to IP-based, hybrid OTT service; live streaming; hosting services; VSAT solutions serving maritime, aviation and mobile backhaul, AsiaSat helps bridge the digital divide, aiming to be the foremost satellite solutions provider in the Asia-Pacific.*

## THE ROLE OF A MODERN MEDIA SERVICES PROVIDER

The market situation across Asia is, in many ways, very similar to other parts of the world, continuing to move through a period of significant market transition, moving slowly away from traditional linear distribution models to on-demand. We are a global company and this gives us a true picture of the sector worldwide.

Direct-to-consumer models – the Netflix and Amazons etc. of this world – have, and continue to, challenge local pay-TV operators in Asia, as, of course, they are elsewhere. The OTT market is quite mixed across the region and requires a flexible approach from a media service provider like ourselves, working with key technology partners to create end-to-end services. An example of this is our recent announcement of a technology partnership with [Viaccess-Orca and MainStreaming](#) for an end-to-end OTT backend platform and app development. But what also has to be kept in mind is that Free-To-Air television is still very popular across the region.

In Asia, we have mature markets like China, India, Japan, Korea and Singapore, where OTT services have gained great traction. Others are catching up as broadband infrastructure improves. But Average Revenue Per User (ARPU) is an issue across the board. It's vital in our role as a modern media services provider with a huge history across the industry, to work with each customer in a bespoke way to understand their business, what they want to achieve

and what the business and technical challenges are to get there.

This is a wider point across Globecast. We are not here to dictate to our customers, rather to understand and develop solutions specific to them. Let's take another example: public internet channel distribution. This has been a hot topic for some time now, but the reality is perhaps a little different to the perception that many, many channels are now ready to do this. That's not necessarily the case. For some, satellite or fibre is still the preferred delivery method – preferred either by the channel or the receiving platform. So, again, it's not a one-size-fits-all approach. A good example of our work in this regard is a deal we signed early this year with a channel that wanted distribution to key affiliates across Asia.

We initially distributed the channel via satellite in the region. However, in close consultation with the client, having built a strong relationship with them, and given the pandemic situation affecting sports, we worked with the parent company to identify whether this was the most cost-effective form of distribution and looked at our fully managed internet End-to-End Connect service. Of course, the customer took the opportunity to explore the market before choosing us. They selected our End-to-End Connect IP solution for the cost-effective and flexible distribution of its channel to affiliates across Asia.

On the contribution side, Globecast has been working on the development of a range of remote production and commentary services (the latter we have been supplying during the pandemic). The focus is the backend infrastructure required for remote production, or parts of a production that are remote. We are not talking about the role of a production company, but as the connectivity provider – low latency, high capacity, extremely reliable connectivity. We are working closely with our customers across our evolving remote production options.

Another area of real innovation is our use of the cloud for media management and payout. Cloud payout has been talked

about for the better part of a decade but is only now truly becoming a reality as we – and I do mean specifically Globecast – have come to truly understand the business and technical models through real-world applications. My colleague Chris Pulus, our Chief Technology Officer in the US, wrote a [very good article](#) about this earlier this year and it's well worth a read. In terms of the cloud, there's a lot more to come, not least with [Infrastructure as Code](#), something we are very actively across.

We are here to help, using our vast technology tool kit and huge experience. Get in touch to find out how we can help you. ■



**by Shakunt Malhotra**  
Managing Director, Asia, Globecast

**GLOBECAST** helps customers to manage content and to deliver it wherever, however and whenever required. The company provides agile and seamless content acquisition, management and distribution services globally, constantly innovating and investing in new technologies to create customer-centric new services. It delivers any type of video service and supplies Content Acquisition, Aggregation and Distribution (CAAD) services to over 250 networks. [www.globecast.com](http://www.globecast.com) | [LinkedIn](#) | [Twitter](#)

## MEDIA MARKET WATCH IN ASIA-PACIFIC

The media landscape is ever evolving, and programmers are looking for ways to further engage their viewers while also still capturing new audiences. In Asia-Pacific, there is significant market opportunity. The question is: What's the best way to reach that potential? While it can be tempting to focus on new technologies, it's growth, reach, and revenue that matter most. Satellite continues to hold its ground in this competitive market, offering programmers the freedom to innovate, thanks to its reliability and revenue-generating opportunities.

Linear distribution is the preferred delivery method of video in Asia-Pacific. Traditional pay-TV services lead the way in revenue generation and content accessibility, making up 63% of market penetration and accounting for 655 m subscribers.

Data shows that consumers are looking to add to their existing services, rather than cut the cord completely. Cable services account for 57% of households and make up 56% of the revenue, half of the market. IPTV has seen growth over the years and accounts for 28% of revenue and 21% of total market share. Over the next 10 years, cable, IPTV, and direct-to-home (DTH) services are all expected to grow. Cable subscriptions are expected to grow 3.3% to a value of US\$26 bn and DTH subscriptions are projected to grow 22% to a value of over US\$10 bn. Much of this growth will come from emerging markets

in Southeast Asia. This is due in part to the affordability of traditional pay-TV, as well as its availability in both urban and rural areas.

Digitization is driving cable services in smaller markets due to the migration of analog connections. 71% of cable households in the Asia Pacific market had a digital connection in 2018, paving the way for higher quality content. As a result, the number of HD households in Asia Pacific is also rapidly increasing. By 2029, the number of HD households is expected to increase to 306 m, which is a 78% increase from the reported number in 2020.

The emergence of new distribution models like Over-The-Top (OTT) have put some pressure on the linear distribution market due to perks like mobile-first viewing and a seemingly endless variety of content. The hope from providers is that the low cost of streaming platforms will help reach more viewers. While pressure has been seen in urban markets, the average OTT consumption in 2020 was 102 minutes per day whereas linear TV still stood as the leader at 140 minutes per day.

Satellite continues to be the most reliable and affordable option for distributing media, giving programmers access to more revenue to drive more innovative content than ever before. When utilizing satellite, programmers have access to more content, coverage, flexibility, and revenue. Monetization of content is a key driver



for programmers and one of the biggest opportunities in addition to subscriptions, is advertising. By 2024, broadcast TV advertising revenue is expected to be US\$44 bn whereas non-broadcast TV will be only US\$2 bn. To capture this advertising revenue, programmers need to provide and be a part of quality, attractive channel lineups that attract viewers. The large, unrestricted coverage of satellite provides opportunity for programmers to capture this revenue and go where the demand is.

The ability to reach viewers and provide high-quality, desirable programming is what maintains the sustainable business model programmers require. Satellite will continue to lead the way for regional and international distributors as content and bandwidth needs rise because of its reliability, large coverage area, and accessibility to global content. That's why satellite remains the truest enabler of innovation and monetization for distributors in Asia-Pacific. ■



**by Terry Bleakley**  
Regional Vice-President, Asia-Pacific, Intelsat

*As the foundational architects of satellite technology, **INTELSAT** operates the world's most trusted satellite telecom network. We apply our unparalleled expertise and global scale to connect people, businesses, and communities, no matter how difficult the challenge. Intelsat is building the future of global communications with the world's first hybrid, multi-orbit, software-defined 5G network designed for simple, seamless, and secure coverage precisely when and where our customers most need it. Follow the leader in global connectivity and "Imagine Here," with us, at [Intelsat.com](https://www.intelsat.com).*



## UNIFIED CLOUD PLATFORM SERVICES FOR CONTENT BROADCASTERS

We are living in a world which is moving rapidly towards the realm of instant availability, and there, we are beginning to see a paradigm shift in audience behaviour. The emergence of OTT platforms, on-the-go consumption of content and affordable data services have played a pivotal role in the transformation of the broadcasting industry. Traditional broadcasters are facing tough competition from OTT players as the latter segment is biting into the common revenue pie. The traditional broadcasters need to evolve their business models and adapt to new technologies so that they can have better cost control and at the same time, seamlessly expand into this new high potential market, thereby helping them to sustain revenues and make better profits.

Cloud platforms have transformed businesses across industries and are driving the transformation in the media industry as well, especially in the post-pandemic world. The impact of the pandemic is visible in every industry. Linear TV market, despite seeing a rise in viewership, has also suffered a dip in revenues due to reduced advertising expenditure by brands. The adoption of cloud workflows can prove to be a game changer as it substantially reduces the operational expenditure for broadcasters. Here are some of the major benefits of unified cloud platform services for broadcasters:

### INTELLIGENT CONTENT DISTRIBUTION

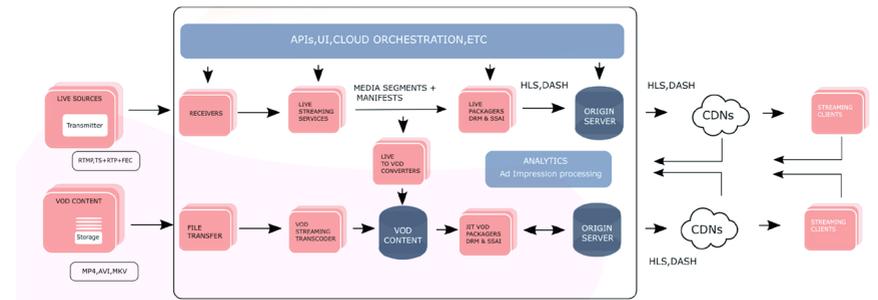
Unified cloud platform services enable the broadcasters to deliver the content to multiple platforms simultaneously without any capital expenditure. Broadcasters can deliver live content to satellite Direct To Home (DTH), OTT, fiber, and IP Networks by using the unified cloud platform. This is great power to have as the broadcasters can now reach a wider audience and at a substantially reduced go-to-market time.

### STREAMLINE OPERATIONS

Cloud platforms are highly efficient when it comes to managing multiple feeds which allow broadcasters to monetize the content in a better way. Cloud platforms help broadcasters to execute content rights management efficiently, grant access to selective platforms for live events, and enable geo-tagging, all of which contribute towards enhancing revenue opportunities from a particular event.

### REMOTE EDITING & REMOTE PRODUCTION

Earlier broadcasters had to invest heavily in creating dedicated edit suites for running 24x7 broadcast operations. Unified cloud platforms enable broadcasters to perform remote editing as the content can be accessed globally through the cloud in a highly encrypted environment. Frame accurate editing can be done on proxies remotely and the content is instantly



published across the desired platform including social media platforms.

Today's cloud infrastructure makes it possible to have multiple live camera feeds from event venues available globally with low latency, which forms the foundation for remote production. By using cloud, remotely located production teams can access these live camera feeds, and use software based tools to produce the on-air feed without being present at the event venue itself. This leads to substantial cost savings for the entire broadcast value chain.

### HIGHLY SCALABLE

Cloud-based platforms are highly scalable. Broadcasters can originate new channels very quickly through cloud platforms which makes it easier to enter new markets with high business potential without investing in building new infrastructure.

Cloud-based platforms work on a pay-as-you-go model which ensures optimum utilization of resources. Above all, cloud-based platforms can be

modified according to changing audience demands and can be integrated into future technologies without any hassle. Cloud-based broadcast is also capable of handling sudden surge in viewer traffic which normally happens in the case of live sports and reality shows. The system can be scaled to cater to the increased traffic in a matter of minutes, which is a great power to have.

The pandemic has accelerated cloud adoption across the Media & Entertainment industry. Most of the broadcasters are seeing their businesses growing on cloud tech along with creating multiple revenue streams. By the year 2025, most of the small and big broadcasters will permanently move to cloud platforms to create lean and efficient business models. Cloud platforms will link the entire media value chain and are expected to benefit every stakeholder within the media industry ecosystem. ■



by Sanjay Duda  
CMO, Planetcast

Founded in 1996 with a vision to revolutionize the broadcast industry globally, **PLANETCAST** has been an epitome of quality and trust for almost two decades. With teleports and media centers in Singapore, Mumbai, Delhi NCR and Cochin, PLANETCAST's ability to conceptualize, architect and implement new and expanded capabilities allows clients to take their business to the next level. For more information, visit [www.planetc.net](http://www.planetc.net)

## CLOUD BROADCASTING: IS IT THE NEW NORMAL?

TV consumption was undergoing disruption long before the pandemic. The growing popularity of streaming platforms over the past few years has been causing an emergence of new consumer expectations for over-the-top (OTT) and video-on-demand (VOD) content that can be enjoyed seamlessly across multiple devices, anytime, anywhere. Large-scale lockdowns over the past 18 months have only served as the catalyst to accelerate this.

The most significant development, however, is what I term the “democratisation of video”. Consumers can switch between linear programming, a streaming service, and on-demand content, all within the span of an hour. They’re also moving away from watching only a handful of prime networks and are preferring to consume content asynchronously or through streaming services alongside linear TV packages. The result is a fundamental transformation of the viewer-broadcaster relationship dynamic.

While some may see shifting consumer demands and increasing competition from new players as mere challenges to address, I see these as valuable opportunities for broadcasters and media and entertainment (M&E) companies to maintain their competitive edge and attract new audiences – as long as they’re empowered by the right technology and data.

### The imperative for broadcast-quality cloud

The time has never been riper for broadcasters to establish their pole position in the market by adopting hybrid distribution models, expanding content monetisation, and providing non-linear video options including OTT and VOD.

But to do so, systems and processes can no longer stay isolated from each other, and simply sticking to existing on-prem workflows won’t cut it. Leading broadcasters of the future will be those that have worked out how to optimise their digital operating models to build integrated, intelligent workflows powered by data-driven decision-making.

Cutting-edge cloud-based infrastructures offer exactly that. Broadcasters can streamline end-to-end production processes and reduce OPEX costs through improved agility and scalability, centralised asset management, and greater all-round efficiency. With cloud broadcasting, a whole new realm of possibilities opens up – media companies can redesign their virtual media supply chains for greater flexibility and substantial cost savings; make content creation and distribution a seamless part of the broadcast workflow; and speed up the delivery of branded TV channels for accelerated audience acquisition and market growth.



### Supporting broadcasters in a dynamic M&E landscape

At SES, we’re firm believers in the potential of cloud to deliver amazing digital experiences everywhere that meet unique and dynamic business needs. That fuels our commitment to helping broadcasters and content owners build their own competitive advantage in a future of increasingly fierce market competition. Our partnerships with the world’s leading cloud service providers, including Microsoft Azure and Amazon Web Services, allow us to offer fully scalable and resilient SLAs that ensure 24/7 delivery from the cloud, whether it’s a single pop-up channel or a full national service, so broadcasters have peace of mind that their cloud transition process will be as smooth as possible.

And it’s certainly affirming to know that SES’s Cloud Payout service is now the

trusted cloud broadcasting solution of over 60 TV channels across the world across Africa, Europe, and Asia-Pacific. Many content owners and broadcasters on Ethiosat, Ethiopia’s first-ever dedicated free-to-air (FTA) TV platform, have moved to SES’s Cloud Payout service to manage their linear TV channels and content assets more flexibly and cost-effectively.

The time to transition is now. The return to pre-cloud “business as usual” is unlikely, so broadcasters and M&E companies that want to stay ahead in the new normal should embrace cloud-based operations and remote programming distribution sooner rather than later. ■



**by John Huddle**

Director, Market Development, Asia, SES

*A leader in global content connectivity solutions, SES operates the world’s only multi-orbit constellation of satellites with the unique combination of global coverage and high performance, including the commercially-proven, low-latency Medium Earth Orbit O3b system. SES’s video network carries over 8,650 channels and has an unparalleled reach of 361 m households, delivering managed media services for both linear and non-linear content.*

## THREE STEPS TO SECURING THE STREAMING INDUSTRY'S FUTURE

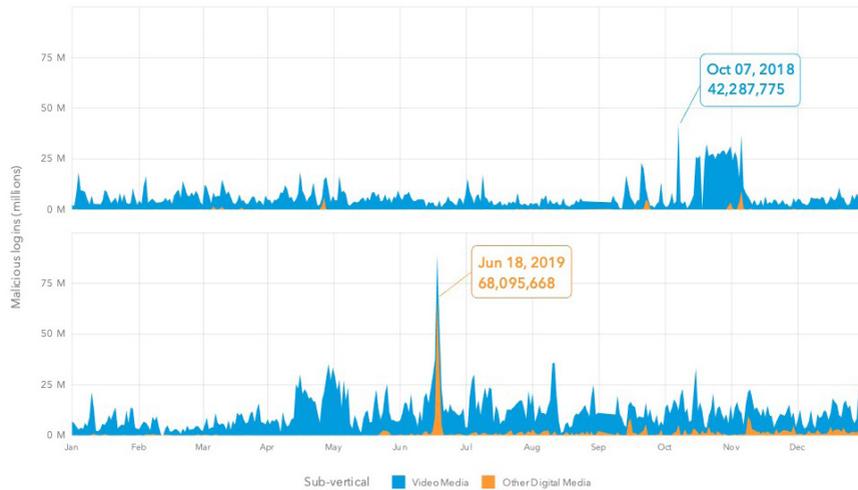
The way we consume video content has changed. The media and entertainment industry has been forced to rethink and transform the way content is consumed as the pandemic move more people online. This includes pivoting strategies, such as with [fanless sporting events](#) in Tokyo and Europe or direct-to-streaming releases of movies like Cruella and Black Widow. The success of these events and high fan

engagements point to the viability of the industry in this digital age: The streaming industry is booming, and it is here to stay.

### BUT THERE IS A DARK SIDE. PIRACY.

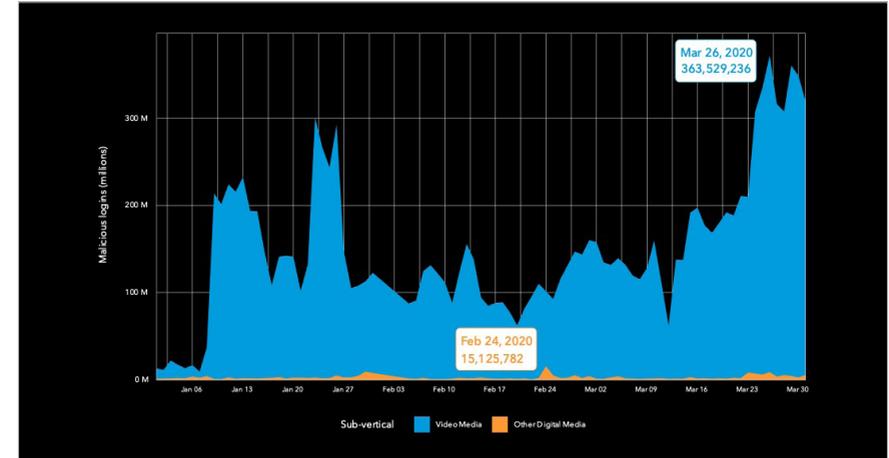
As streaming volumes rise, so has piracy. In fact, piracy is a billion-dollar business!<sup>1</sup> Pirates are taking advantage of improved global Internet connectivity and the

### Daily Malicious Login Attempts Against Media 2018 vs. 2019



According to Akamai's [State of the Internet / Security Report | Credential Stuffing in the Media Industry](#), over the 24-month period from 2018 to 2019, there was a consistent stream of credential stuffing attacks across the media industry

### Daily Malicious Login Attempts Against Media Q1 2020



A large spike in malicious login attempts during Q1 2020

digital sharing economy. Above all, they are exploiting frustrated consumers, the ones looking for ways to circumvent subscription-based platforms and view free content through illegal streams. According to Statista.com, piracy will cost TV and movie providers almost US\$52 bn in revenue worldwide in 2022.

Pirates are now more sophisticated and have proven to be a formidable force against OTT players, negatively impacting their bottom lines, jobs, and licensing. Their activities defraud content producers, destroy customer trust, and most importantly, put everyone at risk of criminal activity.

### CONSUMERS ARE IN HARM'S WAY TOO

Consumers who stream from illegal websites and apps also make themselves more vulnerable to threats such as ransomware and credential stuffing.

After all, who can forget the 2019 hack of Disney+ where thousands of customer accounts were stolen and put for sale on the dark web<sup>2</sup>, as well as the cyberattack that HBO experienced in which 1.5 terabytes of data was claimed to be stolen<sup>3</sup>.

Unfortunately, there is no silver bullet to the issue of video piracy. However, what is clear from various global piracy initiatives is that every party involved in the end-to-end process of the value chain has a role to play in stopping content piracy.

<sup>1</sup><https://avia.org/anti-piracy/>

<sup>2</sup><https://www.bbc.com/news/technology-50461171>

<sup>3</sup><https://www.nytimes.com/2017/08/02/business/hbo-assesses-damage-from-cyberattack.html>

## PROTECT. DETECT. ENFORCE.

In Akamai's paper, "[Inside the World of Video Pirates](#)", we recommend the framework - Protect, Detect, and Enforce - as part of a strategic anti-piracy posture that content providers can strategically review and combine with other technical solutions to form an effective anti-piracy framework.

### Protect

Protecting internal production systems from theft and having a robust digital storage is key to stopping content piracy. Protecting viewers' personal information is also important to maintaining public trust in content providers.

By adopting a Zero Trust framework, organizations can strategically review the threat landscape based on their role in the industry and implement relevant operational and technical initiatives to minimize the impact. Zero Trust can also proactively identify and block targeted threats such as malware and phishing, which are tools used by pirates in their man-in-the-middle attacks.

### Detect

As with any form of theft, detection of any infringement is essential. There are several methods of detecting pirate

activity in almost real time. This includes fingerprinting, a method to identify video content without modifying the original media; watermarking, which enables service providers to detect piracy, identify those who engage in it, and then do something about it; and lastly, stream log identification, which allows real-time picture of infringing activities based on authorized and unauthorized IP addresses.

### Enforce

When pirate activity has been detected, it is important to then be able to act in an appropriate manner. Depending on your strategy, this can include revoking access, modifying the legitimate stream with alternative content, and lastly, real-time messaging, to provide the illegal viewer to legitimate streams and, if infringement continues, send legal notices.

In the new normal where expectations for easy access to digital content is non-negotiable, ensuring the integrity of content produced will be crucial. Having an appropriate, robust defensive posture would be a critical part of the solution. ■



by **Hrishikesh Varma**

Director, Product Management, Akamai Technologies

*AKAMAI's intelligent edge platform surrounds everything, from the enterprise to the cloud, so customers and their businesses can be fast, smart, and secure. Akamai keeps decisions, apps, and experiences closer to users than anyone — and attacks and threats far away. Akamai's portfolio of edge security, web and mobile performance, enterprise access, and video delivery solutions is supported by unmatched customer service, analytics, and 24/7/365 monitoring.*



# FUTURE OF TV IN ASIA

People tend to overestimate what can be done in one year, and underestimate what can be done in five or ten years, visionary computer scientist J.C.R. Licklider predicted in 1965. More than half a century later, organisations still underestimate just how much can be accomplished in an industry in five or ten years.

Take the OTT landscape for example. Five years ago, Netflix launched #NetflixEverywhere, bringing its Internet TV network to the world, to virtually any device and in multiple formats, dramatically changing the Internet TV landscape. Five years later, Disney announced that it would close its television channels in Asia to focus efforts on its new streaming service Disney+. And Netflix, as we all know, has now become synonymous with video content streaming.

Within these five years, we've also seen local players move into this space, such as Viu, Hooq, Iflix and Genflix – all trying to capture a share of the growing OTT pie, and testament to the fact that demand for OTT services is growing in Asia.

How did Asia go from a predominantly free-to-air broadcast television environment to where we are today with not one but multiple global and local players in the market? And if OTT is the future, then where should brands go from here?

## THE RISE OF OTT IN ASIA

In the past five years, we've seen Internet speeds pick up. There is easier access to Internet, due to lower data costs and more service providers, leading to more individuals going on the Internet. For example, the cost of data in Indonesia has dropped by a staggering 85% in five years while the average Internet speed has tripled. Internet penetration currently stands at 73.7%, with 27 m new Internet users from last year, and it increases every year. <sup>1</sup>

Consumers also have greater access to devices that can playback videos. In APAC, current smartphone adoption stands at around 64%, but this is expected to rise to 81% by 2025. <sup>2</sup> Couple that with a greater appetite for e-commerce and buying online, and you can start to see

<sup>1</sup>Digital 2021 (Indonesia), Report by We Are Social & Hootsuite - <https://datareportal.com/reports/digital-2021-indonesia>

<sup>2</sup>GSMA The Mobile Economy 2020 Report - [https://www.gsma.com/mobileeconomy/wp-content/uploads/2020/03/GSMA\\_MobileEconomy2020\\_Global.pdf](https://www.gsma.com/mobileeconomy/wp-content/uploads/2020/03/GSMA_MobileEconomy2020_Global.pdf)

why OTT and premium video content is fast gaining traction among Asian consumers.

There is a clear product market fit for OTT and premium video content in Asia. Many media buying agencies are already aware of the value of premium video and are allocating ad budgets to OTT. Some of this has definitely come at the expense of broadcast advertising and one way broadcasters can work around this is to bring in go-to-market digital services for its content.

## EMBRACE THE OPPORTUNITIES OF DIGITAL

If you're a traditional broadcaster thinking about venturing into the digital space, it's time to forget about the rules of traditional broadcast environments and to embrace the opportunities that digital content can bring your brand and your content.

With OTT, companies can look into maximising revenue through monetisation through a large variety of ways outside of SVOD or AVOD. The key is to be creative and think outside of the box:

### 1. Partner with device manufacturers

OTT platforms can opt to partner with device manufacturers to offer subscription packages with the purchase of a device, such as how you can get access to a 90-day free Viu Premium trial should you purchase a PRISM+ Android TV.

### 2. Partner with brands

Companies can also partner with brands to do a partial takeover of their website content, and weave new advertising content, into existing related content. E-commerce platform Lazada, who recently brought on Korean actor Lee Min Ho as its first regional brand ambassador, took up prime advertising real estate on Viu's showreels, weaving their new content into Viu's existing library of Lee Min Ho's dramas.

### 3. Leveraging sponsored content

Publishers can also work with FMCG brands and have them sponsor content on their platform. During Pride Month 2021, McDonald's partnered Revry, a queer-focused streaming network to sponsor a daylong virtual celebration called House of Pride. Apart from the fast-food giant, other brands have also been jumping on the bandwagon of appearing on the platforms, OTT or otherwise, that their target demographics spend the most time on.

### 4. Broadcasting rights for live events

There is also opportunity for companies to garner exclusive broadcasting rights for live events to drive engagement or get users to use their platforms more regularly. There is a growing availability of live content that content publishers can tap on, whether its sporting events or arts experiences, as events look to go completely virtual or adopt a hybrid mode.

**BE CREATIVE TO DRIVE YOUR BOTTOMLINE**

Here are some tips for companies that want to move forward and capitalise this growing demand and appetite for video content on digital:

- **Empower users with more options**

Give users greater choice to discover and consume the content, whether it is through multiple formats or experiences, and to have the option for them to engage with content creators and with other users in the community.

- **Start a premium service if you do not already have one**

Superfans will go to great lengths and pay amounts to get closer to

premium content. Don't miss out on this monetisation opportunity.

- **Create value for your best advertisers**

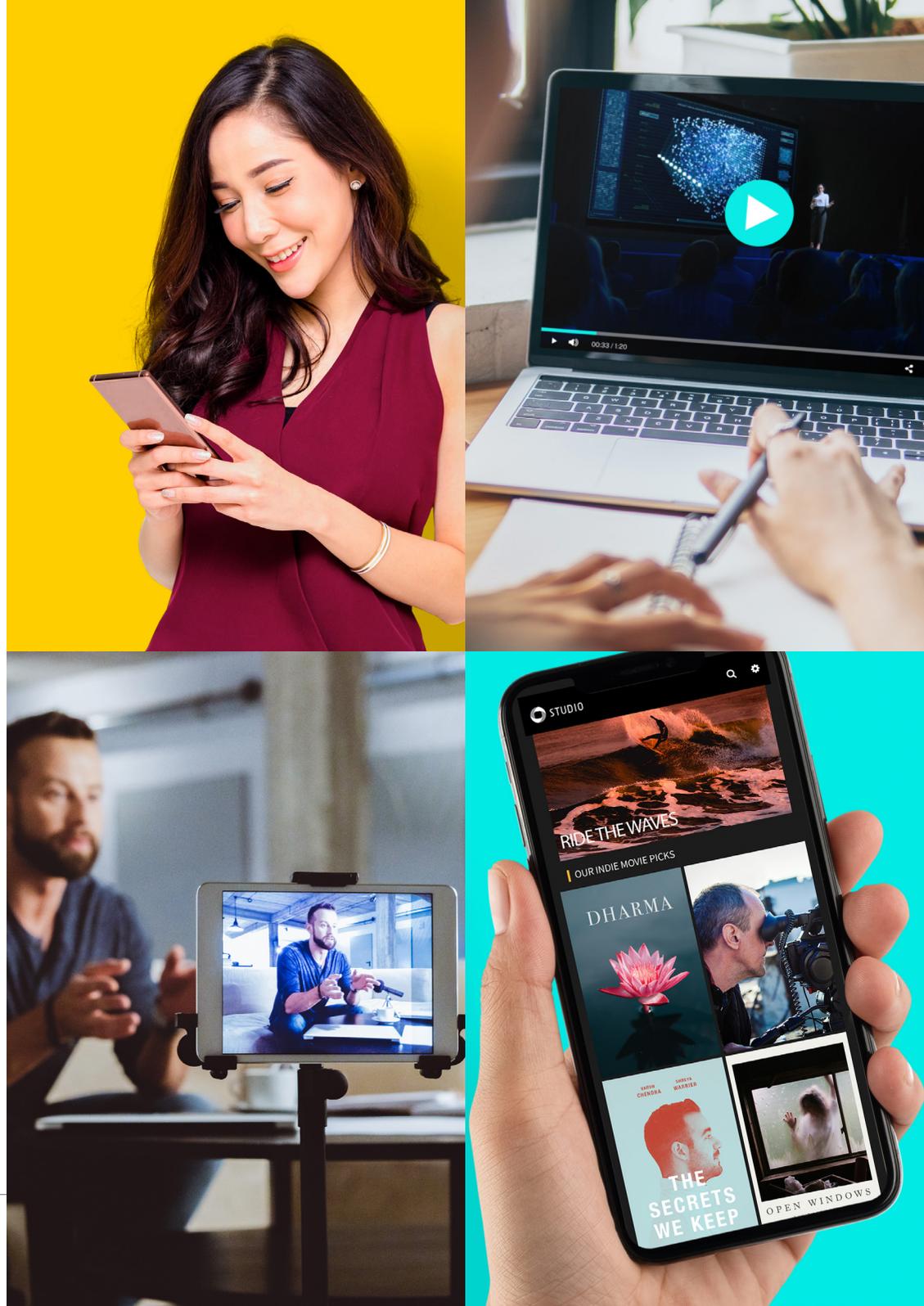
You can do this through sponsorships and promotional opportunities for them that may not exist outside of digital, so they want to keep coming back to your platform to advertise.

The next five years will be completely transformative for the way video content is consumed. Companies need to get as creative as they can in order to improve their bottom line and to refrain from getting too constrained by the traditional notions of broadcast and video, to stay ahead in the digital video content space. ■



**by Greg Armshaw**  
Senior Director, APAC, Brightcove

*When video is done right, it can have a powerful and lasting effect. Hearts open. Minds change. Creativity thrives. Since 2004, **BRIGHTCOVE** has been helping customers discover and experience the incredible power of video through its award-winning technology, empowering organisations in more than 70 countries across the globe to touch audiences in bold and innovative ways. Visit [www.brightcove.com](http://www.brightcove.com) for more information. Video That Means Business.™*





## PARTNERSHIPS WITH MOBILE CARRIERS BECOME CRUCIAL AS COMPETITION IN STREAMING VIDEO HEATS-UP

### COMPETITION IN THE STREAMING VIDEO SPACE

The global OTT market size was valued at US\$121.61 bn in 2019, and is projected to reach US\$1,039 bn by 2027, growing at a CAGR of 29.4% from 2020 to 2027.<sup>1</sup> These forecasts are likely conservative given that OTT consumption saw a 134% spike in the wake of Covid-19 alone.<sup>2</sup>

No surprises that the competition in the OTT video streaming market continues to heat up, with Disney+ growing faster than Netflix and regional players like Viu proving to be a strong contender in Southeast Asia. Disney+ signed up 12.4m new subscribers in its third fiscal quarter ending July 3<sup>rd</sup> 2021, taking the total to 116m worldwide<sup>1</sup>, despite the re-opening of its theme parks giving families an alternative form of entertainment. Netflix on the other hand is rapidly approaching the point at which Europe, the Middle East, and Africa (EMEA) region will become its single most significant pool of customers - growth outside of the US expanded 29% from 51.8m subscribers in FY19 to 66.7m in FY20. Research conducted by Media Partners Asia also suggests that Viu is now the second-largest streaming service ranked by paying subscribers in Southeast Asia behind Disney+.<sup>1</sup> It saw a 37% increase

in paying subscribers (7m), with monthly active users up 62% to 49.4m.

All these players realise that original and exclusive content is crucial to pulling in and keeping new subscribers, particularly in countries where English is not the first language. They are ramping up original content production at an unprecedented rate. Viu has been producing 40 originals to cater to local audiences since 2016. Netflix spent around US\$11.8bn on content in 2020. Reports suggest that Amazon too spent US\$11bn on video and media in 2020, up 41% year on year from US\$7.8bn in 2019.<sup>iii</sup>

### TIERED SUBSCRIPTIONS TO SPUR USER GROWTH IN THE REGION

To fund these extraordinary production budgets, OTT players need to grow their user base aggressively. And they recognise that traditionally, consumers across Asia tend to be more price sensitive. The average revenue per subscriber for Netflix for instance is US\$9.74 for Asia Pacific, higher than it is in Latin America at US\$7.50 but still far lower than what it is in the US. Hence why Netflix has recently unveiled Mobile+ for some of its new and existing subscribers in India, priced at around US\$4.70 for a service

that allows high-definition streaming across smartphones, tablets and PCs (but not smart TVs).<sup>iv</sup> Netflix has offered a low-cost mobile-only plan in India and Malaysia priced at roughly US\$2.70 a month since early 2020. However while these plans will result in healthy growth in new subscriptions in emerging markets, it may not be enough to provide the revenue growth needed to keep the production engine humming at the same pace.

### ENTER SUBSCRIPTION BUNDLING PARTNERSHIPS WITH MOBILE CARRIERS

In recent years, mobile carrier and OTT providers have increasingly banded together to offer subscription bundles, helping grow revenue for both the OTT provider and the carrier. Such partnerships bring more value for consumers and drive-up engagement with existing ones

- for example, a telco offering a Netflix subscription free for a quarter with post-paid mobile plans. It also results in existing customers likely consuming a lot more data and peripheral services, thereby creating a symbiotic win-win for both the carrier and the OTT player. For new entrants like Paramount+ and Peacock, they could leverage the brand visibility and existing reach of the mobile carriers to enter new markets in ways they may not be able to without such carrier partnerships. Sharing marketing and acquisition costs in certain instances can also drive further efficiency at scale for both parties. ■



by **Filippo Giachi**

SVP – Asia Pacific, Middle East & Africa, Docomo Digital

**DOCOMO DIGITAL** is the international payments business of NTT DOCOMO. We partner with carriers, merchants, OTT services, app stores and payment providers in both developed and emerging markets around the world. We solve the challenges of customer acquisition and retention, regulation, and complexity for our partners with alternative payment methods such as direct carrier billing and digital wallets. For more information, visit [www.docomodigital.com](http://www.docomodigital.com)

<sup>1</sup>Allied Market Research. Over-the-top Market by Component, Device Type, Content Type, Revenue Model, User Type, and End User: Global Opportunity Analysis and Industry Forecast, 2020-2027. Available online at: <https://www.alliedmarketresearch.com/over-the-top-services-market>

<sup>2</sup>SG Analytics. 134% rise in content consumption, impact of Covid-19 on OTT platforms. Available online at: <https://us.sganalytics.com/blog/americans-consumed-50000-yrs-of-content-within-a-day-impact-of-covid-19-on-ott-vod-streaming-industry/>

<sup>i</sup>Disney Plus Tops Expectations, Reaches 116 Million Subscribers, Variety, 12<sup>th</sup> August 2021

<sup>ii</sup>After Beating Netflix, Billionaire Richard Li's Viu Looks to Next Battle, NDTV, 17<sup>th</sup> August 2021

<sup>iii</sup>Amazon Spent US\$11 Billion on Prime Video and Music Content in 2020, up 41% From Year Prior, Variety, 15<sup>th</sup> April 2021

<sup>iv</sup>Netflix tests new low-cost subscription plan in India, TechCrunch, 21<sup>st</sup> July 2021



## AUDIO QUALITY IN SMARTPHONES IS GETTING THE ATTENTION IT DESERVES

Through the course of last year, the content consumption pattern amongst consumers has witnessed a behavioural change. People are now consuming content across different devices regardless of the screen size. The pandemic has led to an upsurge in the use of the content streaming platform and user-generated video content on social media. Moreover, the rise of affordable smartphones and the easy availability of the internet has only accelerated this growth. As the screen time has increased, the demand for better quality in terms of content and playback has also increased. Today, users are turning to their phones to catch up with new shows, hear their favorite music or listen to podcasts. Good quality audio on smartphones has become an important aspect for consumers. From mid-tier to premium-tier, smartphone makers are increasingly highlighting the sound quality and audio technology used in their respective devices.

A recent study titled 'The Quest for Immersive AudioVisual Experiences' by CyberMedia Research (CMR), a leading technology market research and advisory firm, revealed that Indonesian consumers are more tuned into 'audio quality', possibly due to long hours spent in an everything-from-home context. Across all parameters, Indonesian consumers accord good audio quality as the second most important factor (Score: 68 out of

100), after battery life (Score: 71 out of 100) when making a new smartphone purchase decision.



*"As people continue to spend more time at home, digital content consumption has become a bigger source of entertainment than ever before. The study elucidates the importance of entertainment in people's everyday lifestyle and the aspirations they have from their smartphones when it comes to consuming content,"* said Pankaj Kedia, Managing Director, Emerging Markets at Dolby Laboratories. *"It has been our constant endeavor at Dolby to enable immersive experience for consumers regardless of screen size. We are ecstatic that people have recognized the difference that Dolby Atmos makes to their smartphones."*

*"In an unprecedented year, Indonesian*

*consumers consumed a diverse mix of audio and video entertainment, in international and local language. The interesting study findings provide us with a basis to better understand evolving consumer aspirations. Across use cases, ranging from content consumption to user-generated content to mobile gaming, consumers continue to seek, and are willing to invest in enhanced and immersive audio-visual experiences,"* said Prabhu Ram, Head-Industry Intelligence Group, CyberMedia Research (CMR).

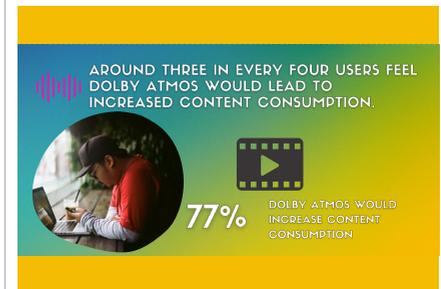


The comprehensive study polled 1500 Indonesian consumers, across the age groups of 18-45 years, and offers a peek into the Indonesian consumer behaviour, the priority accorded to sound quality, and consumer priorities going forward.

The survey also revealed that two in every seven users complained about issues with their smartphone's audio. Cumulatively, one in every three consumers is unsatisfied with their smartphone audio experience. This reflects that there is a demand for better audio quality and smartphone makers must cater to this need. Unlike other audio technologies, sound in Dolby Atmos is freed from the restrictions of left and right channels thus enabling sound to flow above and around you to deliver the

best possible experience.

The consumers of today are seeking better audio experience from their smartphones, and that is exactly where Dolby comes in. Our immersive audio technology, Dolby Atmos, has completely transformed the way sound is being created and consumed today and has grown to be widely popular and accepted by creators and audiences alike. As per smartphone users in Indonesia, Dolby Atmos is key for immersive audio experiences. As many as 87% of users agreed that Dolby Atmos would enhance the overall listening experience while 77% of users concurred that their gaming experience could be enhanced by Dolby Atmos. About 62% of users responded that Dolby Atmos would lead them to decide on a music/video subscription.



Sound is increasingly becoming an extremely important element of the overall smartphone experience, one that can make or break your entire experience. At Dolby, we aim to bring innovations to people and are working with multiple leading mobile OEM brands to integrate our technology and provide advanced audio and visual experience to our consumers. While more and more smartphone makers are prioritizing



better audio quality in their devices, we still need to generate a lot of awareness and education around the importance of quality audio in modern smartphones. With audio playing an increasingly important role in our day-to-day life, better sound technology can make all the difference to new smartphones.

Overall, audiences of today are seeking memorable and spectacular experiences wherever they go. So, the need of the hour is to offer them an immersive experience which stays with them. Our goal will be to continue to offer experiences that bring entertainment to life while redefining the sound landscape in Indonesia. ■



by **Pankaj Kedia**

Managing Director, Emerging Markets, Dolby Laboratories

**DOLBY** transforms the science of sight and sound into spectacular experiences. Through innovative research and engineering, we create breakthrough experiences for billions of people worldwide through a collaborative ecosystem spanning artists, businesses, and consumers. The experiences people have – with Dolby Cinema, Dolby Vision, Dolby Atmos, and Dolby Audio – revolutionize entertainment and communications at the cinema, on the go, in the home, and at work.

# Discover why Vindicia MarketONE is the #1 platform for accelerating subscription growth & revenue.



## MANAGING COMPLEX PROJECTS IN A CHANGING WORLD

**While Smart TV and streaming services have arguably become a ubiquitous part of our lives, the systems behind quality OTT services are becoming ever more complex to serve an increasingly demanding audience. Operators are turning to experienced specialist integrators to help them navigate new features to boost the value of their services, from targeted advertising, content aggregation, recommendation engines and more.**

As the world locked down in 2020, a global audience turned to their televisions for information and entertainment to help get through unprecedented times. New growing video services were already having a significant impact on the delivery systems before the Covid-19 pandemic, but the demand for content and quality OTT services surged like never before.

Paradoxically, operators and MVPDs (multichannel video programming distributors) had already seen customers venture to find their own services on Smart TVs or mobile devices, rather than purchasing packages from operators. This ongoing trend has been amplified in the past year as customers look to save money in the face of financial uncertainty or unemployment.

To attract these increasingly savvy customers, operators need to differentiate their services and provide a user

experience (UX) that goes beyond an appealing look and feel.

There are a number of solutions here. Firstly, quick and simple content aggregation from all platforms is key for the subscribers to an operator's pack. The value for operators here is to enable customers to find the content they are looking for quickly and easily across multiple platforms by providing a simplified yet effective search function with an attractive interface.

Targeted advertising, while undoubtedly a highly complex back-end technical undertaking, is also a fantastic opportunity for operators to differentiate themselves from international streaming platforms and create new revenue streams.

Operators that can provide a fluid and seamless journey between platforms on multiple devices will also win loyalty. If a customer pauses an episode of a Netflix show on their home television and later opens the Netflix app on a mobile device, the user expects to pick up the show at the scene where it was left – not go back to the start of Season One, Episode One. Operators need to be able to do this as elegantly as the streaming platforms.

These are just a few exciting UX elements and value-added services that operators can choose to implement. However, they all require extensive technical integration

## Exciting entertainment solutions for STBs and TV sets



with the video back-end, which is where specialist integration companies like iWedia come in. The vast complexity of systems needed to deliver a quality OTT service should not be underestimated, so operators should look for companies with global expertise that can help to demystify and simplify the process.

A particularly interesting example is the role played by iWedia in a major launch by TRUE, the largest Thai telecommunications operator, which decided to offer a premium OTT experience of its TRUE ID universe, including a cutting-edge Android 4K set-top box and multi-device UX. With a special focus on application development

compliant with Operator Tier specifications, live TV content delivery excellence and customer engagement models using video overlays and analytical tools, iWedia helped TRUE to resolve a highly complex puzzle involving the integration of several third-party manufacturers and SoC (System on a Chip) makers. The project was completed in six months, and became a major market success, having shipped 2.5 million set-top boxes in two years.

iWedia offers a wide range of professional advice and services, from technological consultancy and architecture definition to skilled execution, deployment and maintenance. Understanding not only each component of the system individually but also the interactions between these components without losing sight of the overall architecture is the main challenge of successfully managing an increasingly complex end-to-end service. ■



**by Xavier Marlé**  
Director of Sales and Business  
Development in Asia Pacific, iWedia

**IWEDIA S.A.** provides world-class software solutions for connected TV devices. We are pioneers in Android TV and support our customers with software architecture and design expertise, field proven products and cost-effective engineering services out of our development centres in Serbia. We are proud to be serving major Telecom operators, Pay TV operators and tier 1 automotive OEMs with our media solutions.

## INNOVATIVE WAYS TO PERSONALIZE STREAMING VIDEO DELIVERY TO IMPROVE VIEWER ENGAGEMENT

As we approach 2022, the growth of online video consumption over the past year continues, as has the competition for viewers among OTT service providers. Audience expectations of a broadcast-quality experience with no rebuffering is still in place. Competition for more viewers and retaining existing audiences is driving service differentiation by leveraging new streaming technologies to provide more engaging experiences. The latest advances in video streaming technology, including lower latency live streaming and the ability to personalize content and add interactivity, bode well for delivering a differentiated consumer online experience.

For content providers, getting the basics of online video delivery right is the place to start. Audiences can be located anywhere, so you need a global distribution network that can reach them, and also scale to handle unexpected spikes in demand for streams - think live sports streaming coverage and log in demands in the final minutes of a tied match. As the variety of viewing devices expands, providing support for any of your viewers choices is critical.

Partnering with top tier global CDNs can provide you with the audience reach, scale, and services, such as offloading the complex workflow to format streams for these devices, and help you nail the basics.

After getting the basics stable and robust, the next area to look at is viewer personalization, which is another way to drive engagement and improve monetization. Various forms of personalization can be structured as premium priced subscription options, or for advertising supported services, to improve stream monetization by presenting more relevant ads to viewers based on viewer engagement and online behaviour.

Inflexible subscription offerings are a source of viewer frustration, as people want to consume online video the way they want. Letting consumers select the subscription services that are bundled for them and offering an ability to purchase single shows or series from other services, will go a long way in mitigating this sore point.

OTT services covering live sports offer the most opportunities to innovate in personalization and viewer engagement. Current popular offerings include premium options for key moment alerts during matches such as scoring, highlight plays, tie scores in the final minutes, and updates on rival team matches. Some stream providers are experimenting with augmented reality overlays of selected player in-game stats.



Often the most exciting sport moments occur in the final minutes of a match, with a tied or close score, overtime periods, or the adrenalin rush of penalty kicks to decide the winner. Some rights holders are testing small fee join-ins late in matches. Subscribers to this option, who may not have been watching the match, receive key moment alerts on their mobile devices along with a join link to connect to the live stream. These microtransactions could be a good additional revenue source.

Sports fans enjoy watching matches with their friends. This is easy if they are all locally based and can meet in person. To include friends living out of region, traveling, or away for various reasons, "watch together" apps provide a way for small groups of fans to enjoy each other's comradery while watching matches. These apps provide another revenue stream and offer further group personalization options.

### CONCLUSION

Live and on-demand online video OTT services face increased competition from major content rights holders, and increasingly the large social media companies, for sports rights. Developing new and more diverse revenue streams is critical. Exclusive content will also be crucial.

The ideas for improved viewer engagement discussed can be implemented with technology that's here today to drive better personalized engagement and excitement with existing viewers, reach new markets globally, and add revenue streams. Offer your viewers the best possible streaming experience and they'll keep coming back for more. ■



**by Charles Kraus**  
Senior Product Marketing Manager, Limelight Networks

**Limelight Networks, Inc.** (NASDAQ: LLNW) is a leading provider of video delivery and edge cloud access services. Limelight offers one of the largest, best-optimized private networks coupled with a global team of industry experts to provide edge services that are fast, secure and reliable.

## HOW REMOTE PRODUCTION IS SHAPING THE FUTURE OF BROADCASTING

The concept of a TV production crew producing an entire slate of live programming from their homes, located in various countries worldwide, seemed inconceivable only a matter of years ago. This type of distributed production workflow is increasingly becoming the norm for all kinds of live programming – a process accelerated following a year of Covid-19 social distancing measures and travel limitations. Alongside the broader industry transition to IP, remote production has become a mainstay within the broadcast industry and, in turn, is redefining the possibilities of the live TV experience.

### EMBRACING THE SHIFT TO REMOTE PRODUCTION

Remote production enables production crews to operate equipment and transmit raw camera and audio feeds through a digital infrastructure to a centralized production studio. Remote production workflows remove the need for media companies to invest in hardware that is only utilized periodically for certain occasions, meaning minimal on-site equipment and technical staff are required at any given time.

While remote production as a concept has existed for several years, the internet and cloud-based technologies are making it more advanced and accessible than ever before. These technologies reduce dependency on specific satellite, fiber, or IP networks while increasing flexibility and lowering costs. What's more, the advent of 5G will boost the use of remote production further, providing more bandwidth, reduced latency, and a specified optimal

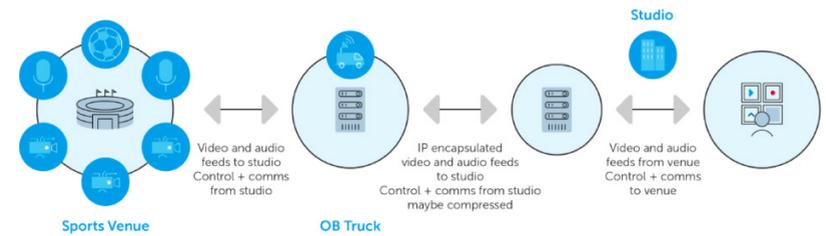
quality of service at an affordable cost.

While remote production has been tried and tested for many arena and stadium-based sports, such as basketball and soccer, its adoption among long-distance outdoor events, such as road cycling, marathons, and golf, is growing. There are exciting opportunities to remotely produce such events, enabling the delivery and production of multiple camera feeds via one centralized facility. The internet and 5G play an important role here, dramatically increasing connectivity at venues while enabling camera operators to be more versatile, given 5G technology enables cameras to be wirelessly linked to production facilities.

### CHALLENGES WITH REMOTE PRODUCTION

There are three main challenges associated with remote production: ensuring synchronization of all live feeds; managing end-to-end latency; and accommodating increased transmission bandwidth.

Close synchronization between the video, audio, and metadata streams must be maintained to ensure a seamless broadcast. Whichever method is utilized to create and maintain synchronization must withstand real-world operating problems, including equipment and transmission failures. Video producers, channel originators, broadcasters, operators, and service providers need to safely and reliably collect, backhaul, and distribute high-quality content anywhere, ensuring audiences worldwide never miss a minute of the action.



There's a strong need to manage and minimize end-to-end latency in the production and distribution chain for live sports coverage, particularly high-value content such as the recent Tokyo Olympic Games. Remote production adds a layer of complexity to this need, as the feeds have a greater distance to travel before they reach the end-user. However, developments in video encoding technology, such as Versatile Video Codec (VVC), and the rollout of low-latency transmission networks, are reducing latency within live sports significantly.

Recent MediaKind research has found encoders utilizing VVC can improve bandwidth efficiency by around 40% when compared with traditional encoders without compromising quality. **These types of advancements are critical to the workflow** because the amount of data bandwidth available at a location and the cost of access are also crucial to remote production's technological and financial sustainability. To transport uncompressed video and audio feeds in the highest quality, venues and production facilities must be equipped with suitable bandwidth. MediaKind's [Cygnus Contribution](#) solution addresses this need, enabling the transfer

of all video and audio feeds back to the production center at the required quality and within the specified transmission delay.

### WHAT DOES THE FUTURE HOLD?

Event venues and remote studios are increasingly equipped with ultra-fast and dependable connectivity, enabling crews to produce broadcast-quality productions anywhere. Broadcasters and service providers can tailor remote workflows to work for them in a way that maximizes their resources and saves costs.

The capacity to safely and quickly transmit live video and audio feeds into the cloud, whether public or private, is required to make this "distributed production" architecture a reality. With developments in this technology advancing rapidly, the dependency on remote production workflows is accelerating, and it's a trend that's likely set to continue. ■



by Narayanan Rajan  
VP, Global Channel Partner Sales, MediaKind

**MediaKind** is a global change leader in media technology and services. Drawing on a pioneering industry heritage and fueled by innovation, MediaKind embraces and champions new standards, methodologies, and next-generation, immersive live and on-demand media experiences worldwide. Its end-to-end media solutions portfolio includes Emmy award-winning video compression for contribution and direct-to-consumer video service distribution, advertising and content personalization, high-efficiency cloud DVR, and TV and video delivery platforms.

## HOW CAN VIDEO INDUSTRY PLAYERS BOOST MONETISATION THROUGH THE METAVERSE?

Metaverse is a buzzword that has been catching a lot of attention lately. Now, what exactly are metaverse games? These are games where video and social media converge with games. Players can interact with one another, going beyond “traditional” games that focus on

objective-based play like scoring points. We see weddings on Animal Crossing, music concerts and movies on Fortnite, and even graduation ceremonies on Roblox. More recently, we saw Ariana Grande holding a Rift Tour Concert on Fortnite.



Images of Wedding on Animal Crossing, Travis Scott 2020 Concert on Fortnite, and Graduation Ceremony on Roblox



Source: PCA

Metaverse games have been gaining huge traction, e.g. Fortnite's userbase of 350M is roughly equal to Twitter at 353M and about 1/3 of Instagram's 1160M userbase.



Source: PCA

Besides the userbase, metaverse games command significant income with Fortnite's monthly average revenue per user (ARPU) of USD7.70, clearly outshining Facebook's ARPU of USD 0.09 in terms of spending. (Facebook's ARPU was USD7.89 – mostly from advertising).

This shows how effective metaverse games are at getting their users to spend money on their platforms - so much so that Facebook wants a piece of the pie. In June, Facebook added game studio “BigBox VR” to their portfolio of virtual reality game studios. The studio's major game “Population: One” is comparable with Fortnite and can be expected to compete head on with metaverse games.

In today's context, video players will lose out if they do not consider metaverse games as part of their business strategy.

### So, how can video industry players then leverage on these platforms?

To capture monetisation opportunities, video companies will have to establish their digital presence by incorporating their businesses into metaverse games

#### They can achieve that in three ways:

- 1) Taking advantage of in-game real estate to advertise
- 2) Creating co-branded goods
- 3) Setting up a digital storefront

We expand each in turn below.

Companies can **advertise** by simply placing their logo in games to increase player awareness regarding a brand or product. We see it in action games where the MasterCard logo is placed in the League of Legends environment. These

in-game advertising familiarises players with a brand or product, thereby driving revenue.

Video companies can also sell exclusive **co-branded goods** in the metaverse as an alternative revenue stream. It can be a replica of physical goods, outfits, inventories, or even weapons with logos printed on them. Earlier this year, Gucci collaborated with Roblox and the bag - “Gucci Dionysus Bag with Bee”, was resold for over US\$4,100. Notably, the price of the digital good exceeded the price of the physical good. This made a huge statement regarding additional revenue.

Lastly, video companies can set up a **digital storefront** to anchor their spot in these metaverse games. Net-a-Porter, a luxury women's fashion brand, sells its physical collections through their storefront in Animal Crossing. Interested players can scan the in-game QR code which takes them to the eCommerce site to complete the transaction. Likewise, players in the Video Industry can establish a digital storefront that enables them to showcase their content and stream snippets of their video. A QR code can then direct players to subscribe to their full content via existing OTT platforms. By setting up a digital storefront, Video Industry players will benefit as it exposes more users to their content and provides an alternative traffic source. ■

**PIONEER CONSULTING ASIA PACIFIC** is an international management consultancy that specializes in telecoms, media and digital. For further information, please contact us on [info@pioneerconsultingasia.com](mailto:info@pioneerconsultingasia.com)

# VINDICIA MARKETONE PLATFORM

## ACCELERATING GROWTH WITH NEXT-GENERATION SUBSCRIPTION MODELS

### WIN AND KEEP MORE SUBSCRIBERS AS YOU EMBRACE NEW SUBSCRIPTION MODELS

You launched a subscription business model—and it's delivering results. An eager subscriber base enjoys your service. Your recurring revenue looks great on the books. But it seems like a new competitor launches every month. Customer acquisition costs keep rising, which is especially worrying in the face of increasing churn. Slowing growth reflects the difficulty of reaching potential customers beyond your core audience.

Staying ahead of the competition requires that you find new (and not too expensive) ways to attract customers. Then, you need to build loyalty fast so subscribers stay with your service.

Vindicia MarketONE delivers. It's an innovative subscription platform that brings together recurring transactions, partner bundling, and user journey management. With Vindicia MarketONE, you can explore new models like subscription bundles as you build your customer base with go-to-market flexibility and insights gained from centralized data.

### OBSTACLES TO SUBSCRIPTION SUCCESS

After a surge of early subscribers, many companies face slowing growth and subscription fatigue among consumers. A number of factors stand in the way of success, including:

- Ever-increasing expense and effort to deliver user journeys that keep pace with expectations set by tech giants.
- Too few processor, currency, language, and payment-type options to expand into global markets effectively.
- Difficulty exploring partnerships that bundle offerings to extend distribution reach with complementary services.
- Little access to large aggregators, such as telecom service providers, that offer subscriptions as bundles in their marketplaces.
- Limited success recovering failed transactions with traditional approaches like retry logic, leading to high churn rates.

### CONQUER NEW MARKETS BY EVOLVING AHEAD OF THE COMPETITION

The Vindicia MarketONE platform features Subscribe, Bundle, and Connect. Each one lets you explore next-generation models as you follow proven best practices. Working together, they provide the foundation for subscription success—innovation and customer relationships that last a lifetime. Bringing these three critical subscription must-haves together delivers faster time to market and much lower total cost of ownership.

Did you know that **63% of e-commerce** flows through marketplaces? Bundling with aggregators is taking shape as the marketplace approach for subscriptions. Vindicia MarketONE makes it simpler to embrace this next phase ahead of the competition.

### GO GLOBAL FASTER WITH SUBSCRIBE

Vindicia Subscribe powers recurring transactions on a global scale. Built-in retention technology sets Subscribe apart by capturing lost revenue. Turn to Subscribe to:

- Get a deeper solution for the international marketplace, including more processor integrations and business model support for EMEA and APAC.
- Accept all leading payment methods and currencies as you comply with relevant tax and privacy regulations.
- Align your business behind subscription goals by sharing data from your subscription data warehouse across departments.
- Retain more subscribers by boosting transaction success rates and resolving as much as 30% of failed transactions automatically.

### EMBRACE NEW MODELS WITH BUNDLE

Vindicia Bundle provides a distribution advantage by lowering risk as you find the bundling options that work for your business. With Bundle, you can:

- Create organic bundles of your own services or exclusive partnerships with complementary services.
- Join a subscription ecosystem with global reach, adding your service to those available to hundreds of

- millions of customers through multiple aggregators.
- Increase engagement and loyalty by making your service more convenient to discover, access, pay for, and manage.
- Sell more subscriptions as you create next-generation partnerships with complementary services, leveraging actionable business insights.

### IMPROVE EVERY USER JOURNEY WITH CONNECT

Vindicia Connect lets you deliver the frictionless user journey that consumers expect—without the technical complexity of other options. Your users get an individualized and flexible experience across services and touchpoints. Connect lets you:

- Deliver a better experience across devices with seamless onboarding, single sign-on, and granular control of privacy and consent settings.
- Support multiple users and profiles along with social login, Apple ID, and parental controls.
- Speed deployment of better experiences with a library of configurable out-of-the-box user journeys.
- Increase conversions and engagement by personalizing services with data and insights captured from every interaction. ■

**SUBSCRIBE:**  
FUEL GROWTH



**BUNDLE:**  
BUILD VALUE



**CONNECT:**  
EMPOWER USERS



**VINDICIA** offers comprehensive subscription management solutions that help businesses acquire and retain more customers. Providing much more than just a billing and payments system, Vindicia's SaaS-based [subscription management platform](#) combines big data analysis, strategic consulting and proprietary [retention](#) technology. We provide our clients with more recurring revenue, more customer data, better insights, and greater value throughout the entire subscriber lifecycle.



## THE GOLDEN ERA OF THE INDEPENDENT

### Why there's never been a better time to be an independent content maker.

While streaming is hardly a new concept, it took a pandemic and plummeting box office revenues to make Hollywood decisively change its game. Now all bets are on streaming.

Studios are aggressively wooing audiences through exclusive content franchises and first-window releases. By reserving the best content for their own platforms, the majors are forgoing millions of licensing dollars and leaving the playing field wide open for independent content makers.

Research from [Purely Streamonomics](#) found that in 2020 indie content accounts for 65.5% of the world's film and TV production activity, valued at US\$144.3bn, a 25.3% rise from the year before. I foresee that trend on an upward trajectory as it seems the stars have aligned for the indies.

Indies now no longer have to contend with Hollywood's formidable distribution muscle and blockbuster content. Instead, they are surrounded by a blue ocean of opportunity driven by unabating consumer demand for content, the rise of global streamers and accelerated growth of niche platforms around the world.

Global streamers like Netflix and Amazon Prime established their international reach

through a glocalised approach (global in scale but with a localised touch) to their programming; by choosing to invest in local production talent and acquiring content rights from independent content makers. The results have been promising and, in the case of *Money Heist* (Spanish) and *Lupin* (France), phenomenal. Global audiences have proven the appetite for great stories from anywhere.

In fact, the U.S.-based Netflix has recently become the largest commissioner of scripted European content, as reported by [Ampere Analysis](#), a position typically held by a European public broadcaster.

Policymakers have also caught on to the success of global streamers and the impact on their local content industries. Europe and Australia have started to mandate quotas for content on streaming platforms to be of local origin, giving independent content makers in these markets greater opportunity.

As conglomerates like Disney+, Paramount+, Peacock, HBO Max extend their footprint globally, there will be no lack of demand to license independent content from the local markets they operate in.

There's also the accelerated growth of niche SVOD and AVOD platforms to consider. Through the internet, niche streamers can now aggregate once



geographically scattered audiences to become regional or even global players. There's France's *Salto*, India's *ALT Balaji* and *Eros Now* as well as China's *iQIYI* and *Youkou*. Imagine the diversity of content that acquisition executives from these streamers will be looking for, all eager to differentiate their services with hidden gems of content.

With greater demand for content and less competition than ever before, there seems to be no ceiling on content spending in sight. There's no better time than now to be an independent content maker. With so many platforms looking to license content, indie producers are in a great position to negotiate rights,

whether it's a single or multi region deal, or multiple non-exclusive deals. The key to turning opportunity into reality is for indie content creators to ensure that their catalogue is discoverable by content buyers anywhere in the world, whenever they are looking. Using online content marketplaces to increase distribution reach and speed now becomes critical and even essential to maximising revenue opportunities for independent content creators. ■



by Ian McKee  
CEO, Vuulr

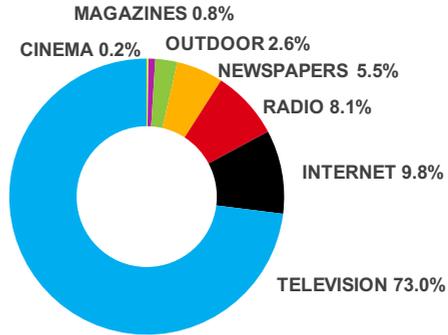
**VUULR** is the largest global online content marketplace for Film & TV rights that connects buyers with producers and distributors worldwide. With Vuulr, content discovery and acquisition takes place digitally, with buyers negotiating directly with sellers, and completing deals online in days, not months. Buyers use Vuulr for free to instantly access over 30,000 titles/ 160,000 hours of premium content across 60 genres; while sellers can showcase their entire catalogue to over 6,000 buyers worldwide at no upfront cost.



# NIELSEN ASIA PACIFIC AD INTEL ANALYSIS

## APAC MEDIA SPENDING SHARE Jan – Jun 2021

Remarks:  
Markets covered Australia, Indonesia, Malaysia, New Zealand, Philippines, South Korea, Singapore, Taiwan and Thailand.  
Media not available: Outdoor is not available in Indonesia, Malaysia, and South Korea. Cinema is not available in Indonesia, Philippines, South Korea, Singapore and Taiwan. Internet is not available in Philippines and Taiwan.



APAC advertising spending for 1<sup>st</sup> half of 2021 has recorded an increase (+20.6%) compared to 1<sup>st</sup> half of 2020 which was impacted by the pandemic.

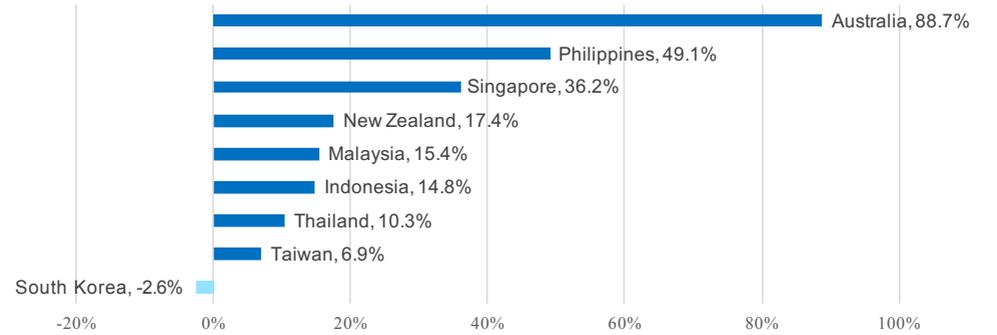
Among all the media, Internet was a strong performer, showing an increase (+68.7%) for 1<sup>st</sup> half of 2021 compared to same period of 2020. Radio (+37.2%), Outdoor (+36.1%) and Television (+17.8%)

all saw an increase compared to same period last year. However Newspapers (-12.1%), Magazines (-4.2%) and Cinema (-6.5%) had a decline in the advertising spending.

For 1<sup>st</sup> half of 2021 advertising spending, Televisions took 73% market share, followed by Internet 9.8% and Radio 8.1%.

## APAC AD SPENDING GAIN & LOSS ANALYSIS BY MARKET

1<sup>st</sup> half 2021 vs. 1<sup>st</sup> half 2020



Remarks:  
Markets covered Australia, Indonesia, Malaysia, New Zealand, Philippines, South Korea, Singapore, Taiwan and Thailand.  
Media not available: Outdoor is not available in Indonesia, Malaysia, and South Korea. Cinema is not available in Indonesia, Philippines, South Korea, Singapore and Taiwan. Internet is not available in Philippines, Taiwan and Indonesia.

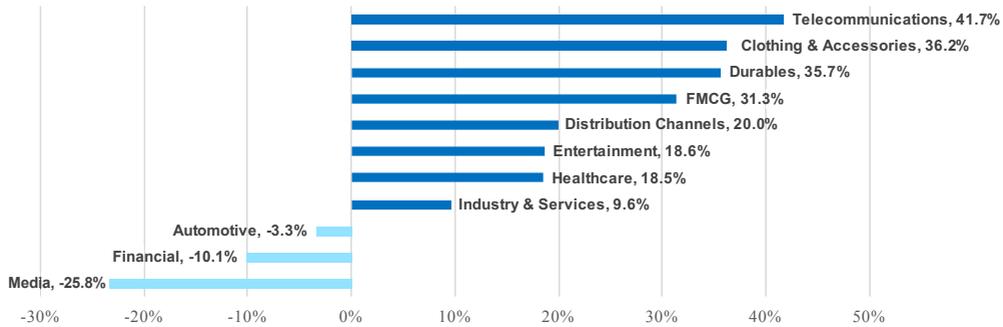
Among Asia Pacific markets, Australia had the highest increase (+88.7%) in advertising spending, followed by Philippines (+49.1%) and Singapore (+36.2%) in 1<sup>st</sup> half of 2021 compared to 1<sup>st</sup> half of 2020 which was under the pandemic impact.

The top 3 sectors contributing to the increase in Australia advertising spending

this year were Entertainment, Industry & Services and Telecommunications.

All other Asia Pacific markets had seen a growth compared to same period last year except for South Korea market, which had a decrease (-2.6%) in advertising spending. This decline was mainly from Financial and Industry & Services sectors.



**APAC AD CATEGORY SPENDING GAIN & LOSS ANALYSIS**1<sup>st</sup> half 2021 vs. 1<sup>st</sup> half 2020**Remarks:**

Markets covered: Australia, Indonesia, Malaysia, New Zealand, Philippines, South Korea, Singapore, Taiwan and Thailand.  
 Media not available: Outdoor is not available in Indonesia, Malaysia and South Korea. Cinema is not available in Indonesia, Philippines, South Korea, Singapore and Taiwan. Internet is not available in Philippines, Taiwan and Indonesia.

This year, 8 out of 11 macro sectors showed growth during the 1st half of 2021 compared to 1<sup>st</sup> half of 2020 with the recovery from the pandemic. Telecommunications (+41.7%) lead the way followed by Clothing & Accessories (+36.2%) and Durables (+35.7%).

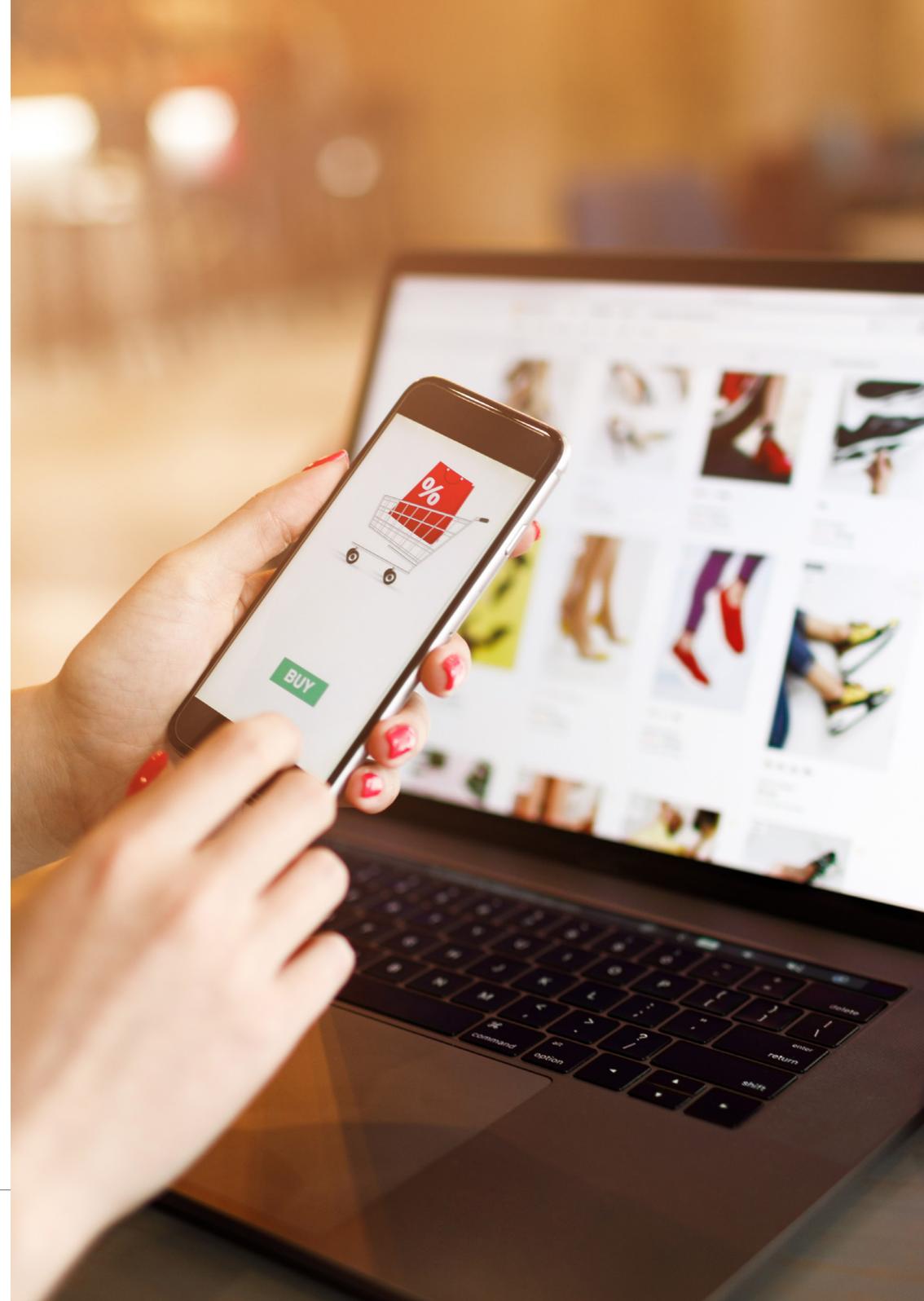
Increase in Telecommunications sector this year was mainly contributed by

Television and Internet with growth of 45.6% and 47.2% respectively in advertising spending compared to last year.

Among the 3 macro sectors that have decreased, Media saw the largest decline (-25.8%) while Financial and Automotive dropped by 10.1 and 3.3% respectively.

**Nielsen Holdings plc** (NYSE: NLSN) is a leading global data and analytics company that provides a holistic and objective understanding of the media industry. With offerings spanning audience measurement, audience outcomes and content, Nielsen offers its clients and partners simple solutions to complex questions and optimizes the value of their investments and growth strategies. It is the only company that can offer de-duplicated cross-media audience measurement. Audience is Everything™ to Nielsen and its clients, and Nielsen is committed to ensuring that every voice counts.

An S&P 500 company, Nielsen offers measurement and analytics service in nearly 60 countries. Learn more at [www.nielsen.com](http://www.nielsen.com) or [www.nielsen.com/investors](http://www.nielsen.com/investors) and connect with us on Twitter, LinkedIn, Facebook and Instagram.



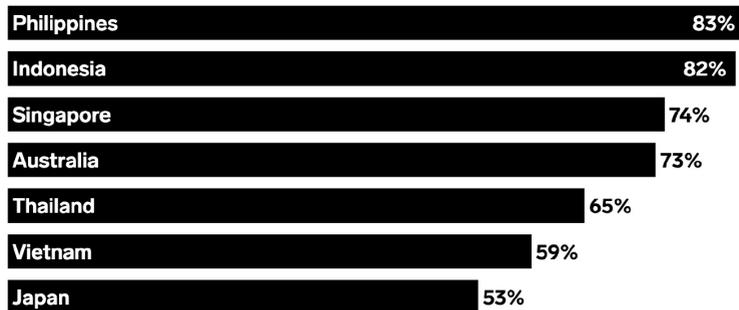
# THE EVOLUTION OF PROGRAMMATIC OTT AND CTV

Our lives have transitioned online, powering a digital revolution. Connected TV (CTV) and over-the-top (OTT) has overtaken the linear TV experience, moving past video-on-demand (VOD) to everyday programming, movies, live streams, and so much more. An Integral Ad Science (IAS) [study](#) found that CTV has become mainstream in key Asia Pacific markets; 7 in 10 consumers in Indonesia have access to a CTV device and a whopping 92% of consumers increased their consumption of streaming content during Covid-19. In Australia, nearly 9 in 10 people stream content on CTV devices, and the story is similar in other markets. SpotX research

earlier this year found that in APAC, 68.5% of consumers regularly watch OTT, predominantly through mobile devices. In more developed markets like Japan, Singapore, and Australia, CTV is also gaining popularity.

Most viewers are seeking out free or low-cost, ad-supported video-on-demand services as they feel the increased strain on their wallets. According to the IAS report, 84% of OTT viewers in Indonesia are willing to see ads in exchange for free streaming content over a paid ad-free service.

## Video Viewers in Asia-Pacific Who Watch OTT Video Daily\*, by Country, Oct 2020 % of respondents



Note: n=7,100 ages 16+; during weekday; \*more than two hours per day  
Source: SpotX, "OTT is for Everyone" commissioned by Milieu Insights, March 4, 2021

## The growing programmatic opportunity in OTT and CTV

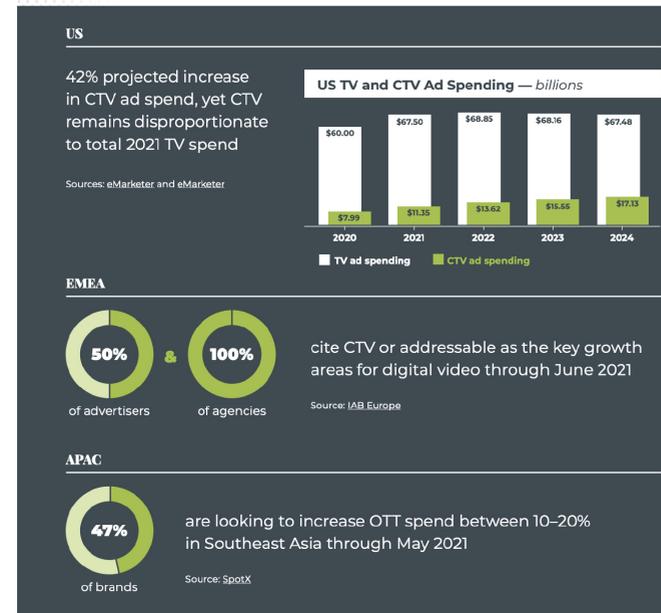
Traditionally TV and OTT ad buys happened separately; however, advertisers increasingly consider them together, indicating a growing trend of all TV being transacted digitally. The efficiencies of programmatic buying and the opportunities to apply data to reach specific audience segments are huge benefits, accelerating the shift of traditional TV budgets to digital channels, especially when it comes to CTV and OTT inventory.

According to [eMarketer](#), CTV programmatic video ad spend in the US is expected to exceed \$6.73 bn in 2021 — accounting for 58.9% of US CTV video ad spend. The majority will be a private marketplace (PMP) and programmatic guaranteed

deals, with rates often negotiated upfront. In APAC, many publishers [predict](#) stronger growth in CTV spends than their US peers, with a 34% rise in ad spend over the next 12 months compared with 20% for the US. The industry is working on advances in technology to allow a greater degree of addressability in CTV and more sophisticated decisioning for programmatic guaranteed buys across all video channels.

As programmatic OTT opportunities grow, streaming content creators and services will look to optimise yield while preserving a TV-like viewer experience. Programmatic technology is evolving to meet these complex needs of advertisers and publishers, and OTT header bidding has emerged as a powerful solution.

### CTV and OTT ad growth



## Benefits of header bidding for buyers and sellers

Header bidding addresses a crucial challenge many advertisers face: access to quality inventory and consumers, at scale. It is a programmatic technique that allows publishers to offer their inventory across formats to multiple ad exchanges at the same time, before making ad calls to their servers. In header bidding, the ad call is sent out simultaneously to all bidders in an auction and the highest bidder wins. Essentially, header bidding allows publishers to sell their inventory to the highest bidder and provides greater visibility and control of the buying process.

For publishers, this means increased yield and revenue as well as more control of their inventory. Meanwhile, advertisers gain greater transparency into the bidding process and fair access to inventory. Buyers can have a better understanding of their reach, with access to more audiences, and a greater chance of delivering their campaigns – as bid requests can be generated for every available impression.

### Safeguarding CTV inventory

Video content presents an immense opportunity for publishers and advertisers to maximise reach and revenue. However, with the proliferation of SSPs in the

market, publishers can find it challenging to manage multiple integrations and optimise yield. CTV advertising platforms such as Publica, which was recently acquired by IAS, can greatly help publishers optimise their resources and inventory by eliminating waterfall latency while increasing bid density. This ultimately helps publishers better monetise their video content. Advertisers will have the opportunity for greater addressability and transparency into the quality of this inventory in the future.

The demand for CTV advertising is growing exponentially, fueled by increased targeting options, measurement, and transparency as part of programmatic buying. This will continue to open doors for advertisers to reach expansive audiences in a more efficient and engaging way.

Yet, CTV measurement is still evolving. Partnering with a trusted digital media quality provider can greatly help brands and publishers navigate this changing landscape. This will enhance advertisers' confidence in OTT and CTV advertising while increasing opportunities for publishers. ■



by **Laura Quigley**  
SVP APAC, IAS

**Integral Ad Science (IAS)** is a global leader in digital media quality. IAS makes every impression count, ensuring that ads are viewable by real people, in safe and suitable environments, activating contextual targeting, and driving supply path optimization. Our mission is to be the global benchmark for trust and transparency in digital media quality for the world's leading brands, publishers, and platforms.



## GETTING PROGRAMMATIC MOBILE VIDEO RIGHT IN ASIA PACIFIC

Video engages, informs, inspires, and drives people to action. And, irrespective of the region, today every connected consumer across the globe prefers to watch video rather than reading text. Mobile devices now deliver a seamless video experience to users, which is

especially significant in a market like Asia Pacific due to its sheer size. Mobile consumption has witnessed exponential growth over the last year and it is high time for marketers to meet their customers' expectations by Doing Mobile Video Right.

### THE KEY GROWTH DRIVERS FOR MOBILE VIDEO ADVERTISING

#### THE KEY GROWTH DRIVERS FOR MOBILE VIDEO ADVERTISING

As cities went into lockdown and public gatherings came to a halt over the last two years, it is no surprise that people have put mobile phones at the center of their day-to-day lives. The video wave can be attributed to the growth of three key sectors: Gaming, OTT, and Short-form Video.

##### Gaming

**40%**

of smartphone users to turn to mobile gaming for the first time; seen as relaxation/ entertainment

**~77%**

of mobile gamers would rather watch ads than make in-app purchases

##### OTT

**40%**

of respondents across Asia Pacific\* rated OTT platforms as having the 'most immersive and engaging content' and being the most 'value for money'

**46%**

Of consumers across Australia, Singapore, India, and the Philippines demonstrated a clear preference for watching videos on OTT platforms

##### Short-form Video

**>200+ Mn**

Be it Roposo by Gance in India, TikTok in Southeast Asia, or Reels across APAC, they have all enjoyed immense popularity with these apps having been downloaded more than 200 million times in the region alone

The platforms are built on easy to share snackable content, comfortably lending itself to virality, and cross-pollination with other platforms as well

Based on data from the InMobi Pulse, Audiences and Advertising Platforms between Jan 2020 to July 2021

### THE STATE OF PROGRAMMATIC MOBILE VIDEO

Brands are realizing the inherent potential of video marketing in creating real connections with their customers. Insights from InMobi's Advertising Platform reveal that in 2020, video advertising spends grew by 130%, accounting for more than a third of all in-app programmatic spends across APAC. Additionally, Clickthrough rates (CTRs) driven by in-app videos outperformed other in-app formats by 145%. Compared to other static display ads such as banner and interstitial, landscape videos had 77% higher CTR. Top advertisers from retail /FMCG, shopping and social media industry have invested heavily on landscape video as it is easy to convert core assets and press play on their campaigns.

### DOING MOBILE VIDEO RIGHT

From screen orientation and precision targeting to the best time of day and placements, adopting the right programmatic video ad strategy is crucial for companies to stand out in the eyes of the mobile-first consumer. So, what does it take to Do Mobile Video Right?

#### Press Play without Latency

On average, mobile video ads take over five seconds to load, and with user attention steeply declining after

the two-second mark, this is simply unacceptable. This latency in ad loading time, frequently caused by being unable to pre-cache a video on a particular device, severely damages the consumer experience and is the major contributor to the user drop-off that ultimately results in low completion rates averaging less than 50% and subsequent poor viewability metrics across connected devices.

#### The Future is Video, the Future is Now

Unlike desktops, users spend 90% of their mobile device time in-app. Frequently used video technology is only optimized to deliver ads on desktop browsers, depending on methods like Javascript tags and cookies, that don't work inside mobile app environments. These video standards were created years ago and were never meant for use in mobile apps, so it comes as no surprise that video ads built for other mediums perform poorly on mobile. This also further impacts load times and severely limits media effectiveness across connected devices. Different digital environments, therefore, require different video player standards for effective advertising. While the old standards were designed for an interactive pre-roll desktop video environment, the new IAB standard is the more appropriate choice for a mobile-first video experience as they ensure compliance with every player. By adhering to these standards

across connected devices' native players, publishers can pre-cache video ads, and deliver a buffer-free ad experience for higher media performance for buyers.

### Mobile first, Not an Afterthought

The inherent nature of mobile devices makes them perfect for delivering immersive video messaging with relevant brand actions to a consumer's current location and mobile context. By leveraging the combined power of sight, sound,

touch, mobile devices can now deliver personalized ad experiences that allow brands to truly differentiate themselves in cluttered spaces. By continuing to run ad campaigns that are not interactive or optimized for mobile-native environments, advertisers are losing out on the opportunity to truly engage their users and meet their campaign Return on Investment (ROI) as well as maximize Return on Advertising Spend (ROAS). ■

### The Advertiser's Checklist for Doing Mobile Video Right

By focusing on the technology that is native to connected devices, brands can ensure that consumers are able to receive a seamless video ad experience and translate it into better media effectiveness. Advertisers must:



Include in-app mobile video as part of your digital media video buys, not just mobile web and desktop

Adopt the latest standards for mobile in-app video

Leverage MRC-accredited viewability partners that understand in-app video measurement

Go programmatic for increased efficiency and transparency



by **Vasuta Agarwal**  
Managing Director, Asia Pacific, InMobi

*InMobi is a world-leading provider of marketing and monetization technologies reaching billions of consumers around the globe. With deep expertise and unique reach in mobile, it is the trusted and transparent technology partner for marketers, content creators, and businesses of all kinds. InMobi's mission is to power its customers' growth by helping them engage their audiences and build meaningful connections.*



# IPONWEB

## THE LASTING CHANGES OF THE PANDEMIC ON MEDIA CONSUMPTION AND THE ADVERTISING ECONOMY

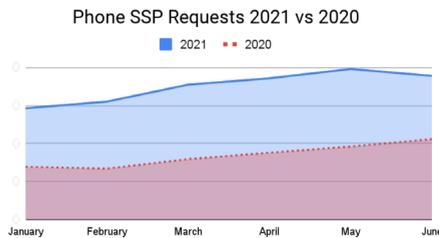
Although some regions have started on the path back to normalcy, behavioural change as a result of the pandemic is still being widely felt throughout most of the world. Asia Pacific in particular has witnessed massive surges in media consumption, device usage, and online shopping over the past 18 months as consumers spend more time at home because of lockdowns and social distancing. And it looks as though some of these shifts are here to stay.

These changes have been confirmed repeatedly by multiple independent sources. McKinsey's Global Covid-19 Digital Sentiment Insights Survey (2020), for example, shows that 71% of users (first-time and regular) plan to continue using digital channels to the same extent or more after the pandemic, with 25% of consumers saying they will increase long-term use of digital channels. Likewise, ASEAN (Indonesia, Malaysia, the Philippines, Singapore and Thailand) surveys that were conducted throughout the past year found that significantly more customers made online purchases. In Indonesia, up to 60% of consumers reported an increase in intent to spend money online even after the pandemic.

### MOBILE CONTINUES TO DOMINATE VIDEO ADVERTISING LANDSCAPE

The increase in mobile device usage in Asia Pacific has been particularly

significant. Already a mobile-first region, a study found that over two-thirds (72%) of all website traffic in Asia Pacific was from smartphones in 2020 (Contentsquare, 2020) – up 19% on pre-Covid numbers. At BidSwitch, we have seen similar increases in mobile video inventory, which grew by 108% between H1 2020 and H1 2021 (desktop only grew 28%). This rise is on top of the almost 50% growth we saw in H1 2020 compared to 2019. Likewise, tablet inventory also grew by 104% during the same time period.



### SHIFT TO DEALS

With media and video consumption reaching even greater heights in 2021, and BidSwitch seeing a 92% year-on-year increase in video inventory, publishers in Asia Pacific are also looking to shift to more deals-based supply monetization. In H1 2021, BidSwitch saw an increase of 689% in request-for-deals inventory; this peaked in the first quarter at 775%, almost eight times the year-on-year growth. This is in comparison to an

increase of only 62% in OpenRTB requests over the same period. A recent study from [OpenX and ExchangeWire](#) also found that in JPAC, deals were the preferred channel and more participants were directing spend toward deals than in previous years.

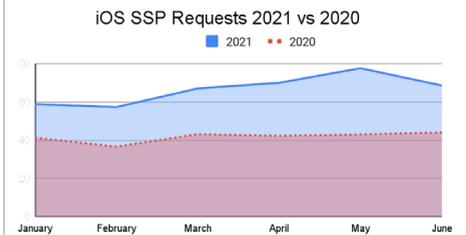
As a reaction to the uncertainty in the market, publishers may be shifting towards deals to improve the predictability and reliability of their revenue streams during a time when full recovery is still only on the horizon (even with the green shoots, new Covid variants can quickly set recovery back). Publishers may also be looking to take more control of their media trading, increasing transparency while also gaining better relationships with their trading partners. Moreover, with the deprecation of the third party cookie, deals are set to become more important for Asia Pacific media traders.

### CHALLENGES ON THE ROAD TO RECOVERY

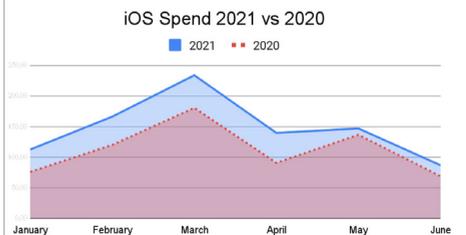
Covid has not been the only thing to impact the digital advertising ecosystem in 2021. On top of Google's announcement in 2020 that Chrome will be moving away from the third-party cookie (now delayed until 2023), Apple made some changes too. With the release of iOS 14.5, the rules for using Apple's ID for Advertisers (IDFA) were updated, requiring users to provide consent for their mobile data to be tracked. Depending on the source and region, opt-in rates for sharing data have been around 10 - 20%. With advertisers no longer able to target or measure campaign effectiveness using IDFA across

the vast majority of apps and users, the ability for publishers to monetize their app inventory has been severely impacted.

Looking at BidSwitch data, iOS requests were up 60% year-on-year in Asia Pacific for H1 2021, aligning with the results shown earlier that mobile requests are up during this period.



Spend on iOS video inventory, while up overall for H1 2021, has dropped since April when iOS 14.5 was released. We saw similar declines from Q2 in 2020 at the onset of the pandemic, with reductions in spend between 40% and 50% month-on-month in both instances.



This could be because media buyers are shifting their media spend to inventory that is more targetable and more attributable in terms of performance; Android inventory saw twice the growth in media spend in Q2 2021 as iOS inventory.

## IPONWEB

### TIME FOR ACTION

As in 2020, we are again seeing an accelerated pace of change throughout the advertising ecosystem in 2021. Identity, media consumption, eCommerce, and media spend security have all been impacted by the ongoing effects of the pandemic and the continued focus on user privacy globally.

Media buyers and sellers need to take advantage of digital's changing tides to successfully navigate the programmatic future, making sure that they:

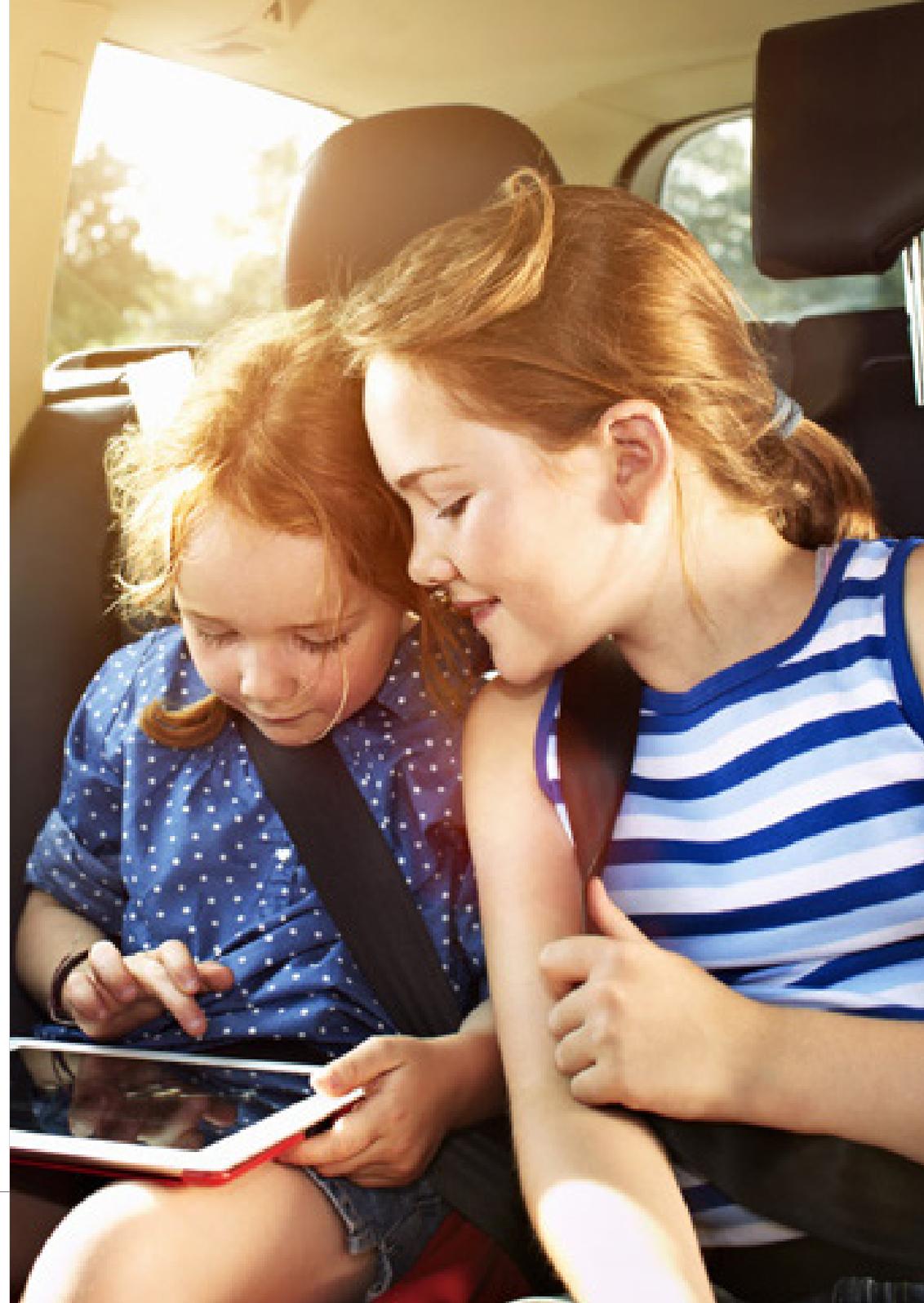
- Have a strategy in place for the current and coming changes to identity.
- Re-establish relationships with trading partners for increased visibility into and control of media trading.
- Start their journey now to refine their data and targeting strategies.

With these strategies in place, brands and publishers can build a stronger digital foundation to ensure continued performance and growth in digital channels, where their audiences are increasingly congregating and spending the majority of their time. ■



**by Ryan Pestano**  
Vice President, APAC, IPONWEB

*As the global leader in smart programmatic infrastructure, **BidSwitch** helps to facilitate more than 4,000 trading connections between 270+ DSPs and SSPs around the world and across all media channels & formats, giving it a unique position in the digital ecosystem. Analyzing almost 50 trillion ad requests quarterly gives BidSwitch unparalleled visibility into both micro-movements taking place in the bidstream, as well as global trends shaping programmatic buying patterns.*



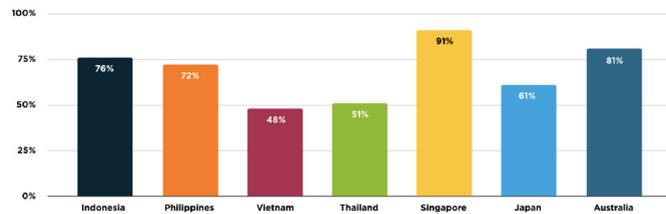
## A PREMIUM AD EXPERIENCE IS THE KEY TO UNLOCKING OTT'S FULL POTENTIAL

Gavin Buxton, Managing Director, Asia at Magnite shares key findings from the "OTT is for Everyone" [research](#) conducted by SpotX, now part of Magnite, revealing the top three considerations for media owners to unlock the full potential of OTT.

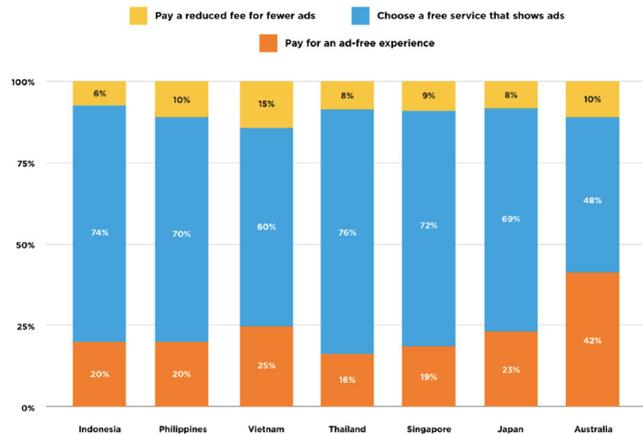
The digital space is a battleground for attention and competition is intensifying. Nowhere is this more apparent than the Over-the-Top (OTT) landscape in Asia Pacific, which has taken the limelight for its premium content and engaged audiences. Our research found that OTT viewership has hit critical mass, with an estimated reach of 392 m viewers and

69% streaming video at least once a week. Advertisers have been quick to seize the opportunity, shifting linear television budgets to OTT. Meanwhile, ad-supported video-on-demand (AVOD) remains a major driver of OTT and a crucial channel for brands to make sales conversions: over one-third (35%) of AVOD viewers report making a purchase after seeing an ad.

PERCENTAGE OF VIDEO VIEWERS WATCHING OTT AT LEAST ONCE A WEEK



TYPE OF STREAMING SERVICE VIDEO VIEWERS PREFER



With an audience-first approach crucial to winning OTT viewers, here are our top three considerations for unlocking the full potential of OTT.

### #1 Maximise the Viewer Experience

Consumers now expect a premium viewing experience from OTT, be it on large or small screens. These expectations carry over to digital advertising. Here, media owners can now leverage Server-Side Ad Insertion (SSAI) technology to create a seamless viewing experience across devices. SSAI inserts ads into high-quality,

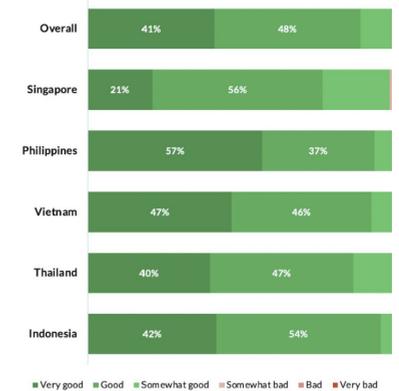
long-form content replicating the viewing experience of TV while winning brands more flexibility and granular targeting.

For live streaming, the smooth delivery of ads can make or break the viewer experience, especially at a time when more OTT viewers are streaming live events. SSAI's ability to handle high spikes in concurrent viewing and drive scale across platforms enables media owners to maximise both viewing quality and monetisation.

How would you rate your viewing experience of watching video content on a traditional TV/smart TV?



How would you rate your viewing experience of watching video content on a smartphone?



### #2 Fight Ad Fatigue

While Asia Pacific OTT viewers are generally receptive to ads, especially when they are funny, shared feel-good content, or featured likable music, ad fatigue is real. Advertisers need to plan accordingly using interactive ads with simple elements such as CTA (Call To Action) buttons and creative overlays. However, keep in mind

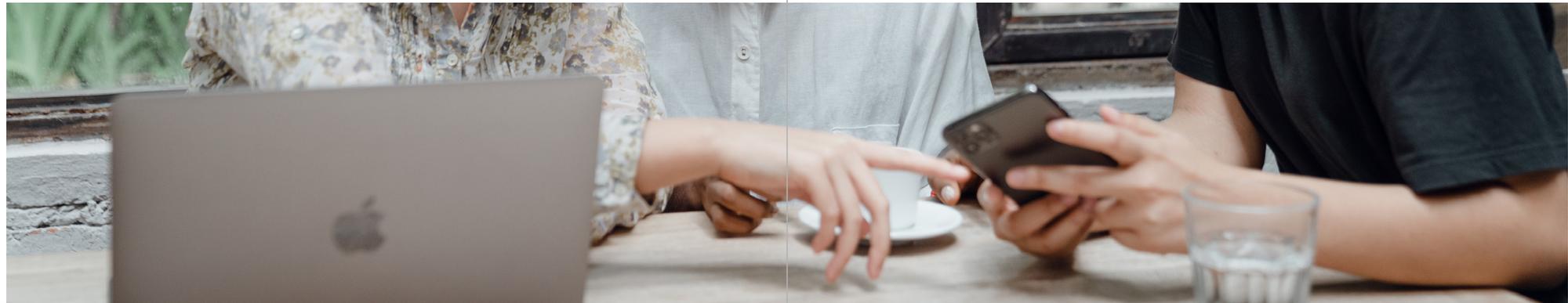
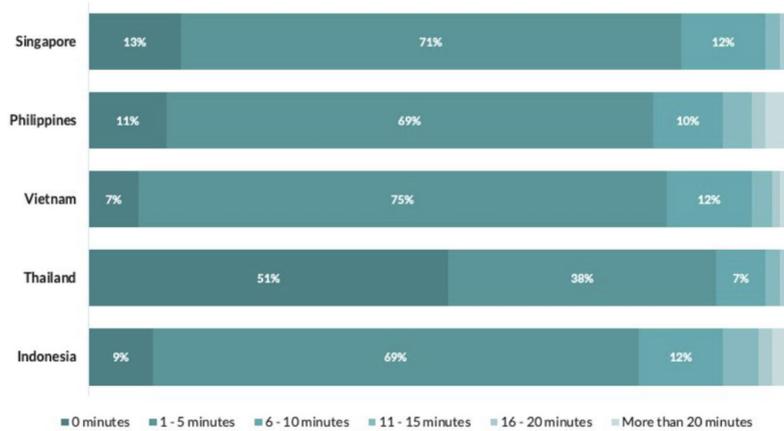
that excessive ad length and frequency can reduce effectiveness. Our research found that viewers are willing to accept, on average, 1 to 5 minutes of advertising per hour of content in exchange for free viewing, with 41% of viewers citing non-repetitive ads as a top factor in their willingness to watch ad supported content.

# Magnite

One solution is ad podding, which enables a single ad request to deliver a mix of ads sequenced together, much like a linear TV commercial break. This lets media owners control ad delivery frequency while eliminating duplication. Ad pods also ease

latency and infrastructural loads. Since ad pods inherently play multiple ads, they typically see higher fill rates, which benefits media owners.

**Thinking about an hour-long video content on a FREE online streaming video content platform, how many total minutes of advertising in an hour would you consider to be ACCEPTABLE?**



### #3 Create Addressable Opportunities for Advertisers

Relevance of advertising is an important consideration for Asia Pacific OTT viewers: 43% of viewers stated they are at ease watching ads if they feel a connection to the content. Digital TV's ability to deliver relevant messaging to target audiences is pivotal to forging this connection. The more addressable opportunities publishers can provide, the more value they'll bring to the table.

As the industry's identity challenges continue to evolve, publishers should look to work with vendors that support the first-party data necessary to deliver show-level, genre, and device

information. This will enable advertisers to communicate with more granularity while also protecting user privacy.

Ultimately, the saying "Audience is King" has never been more true. As the OTT landscape evolves, capturing premium audiences wherever they are with the best possible experience will reap benefits across the advertising ecosystem. ■



**by Gavin Buxton**  
Managing Director, Asia, Magnite

*We're **MAGNITE** (NASDAQ: MGNL), the world's largest independent sell-side advertising platform. Publishers use our technology to monetize their content across all screens and formats including CTV, online video, display, and audio. The world's leading agencies and brands trust our platform to access brand-safe, high-quality ad inventory and execute billions of advertising transactions each month. In April 2021 we acquired SpotX to further enhance our CTV business and better help our clients in this rapidly growing market.*

## VIDEO ADVERTISING EFFICACY IN PREMIUM OTT AND NON-PREMIUM VIDEO ENVIRONMENTS

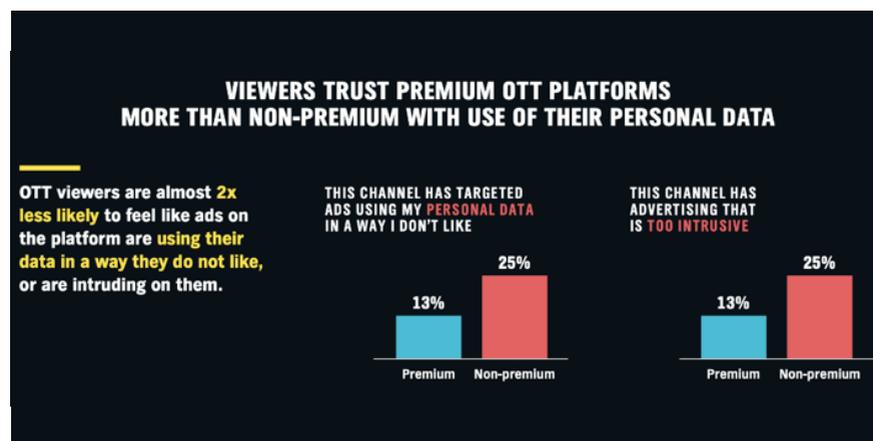
As the Covid-19 pandemic continues to keep consumers in their homes and on their devices, OTT consumption across Southeast Asia has seen strong growth.\* It has become one of the fastest growing media channels in the region. And one that advertisers cannot ignore.

Late last year PubMatic commissioned a piece of research with Kantar to explore the relative efficacy of video advertising in premium OTT and non-premium environments in Southeast Asia. The impact of the same video creative on

conscious and subconscious viewer response was measured in two different environments.

The research found that:

- Premium OTT platforms facilitate better brand awareness and messaging
- Viewers trust premium OTT platforms more than non-premium with use of their personal data
- Viewers on premium OTT platforms are more receptive to ads



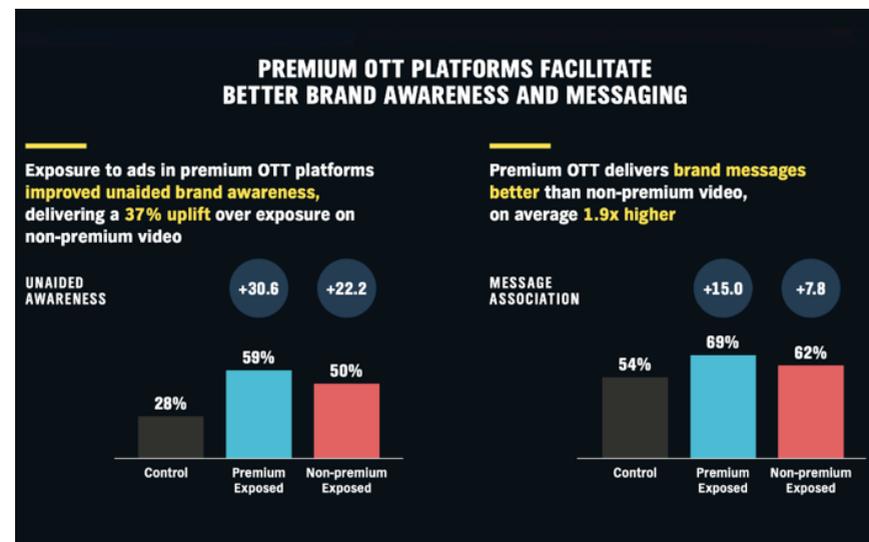
Ads on premium OTT can benefit from a halo effect - resulting in significant uplifts in branding metrics like unaided brand awareness and message delivery.

Unlike their counterparts in other regions, viewers in Southeast Asia are remarkably tolerant to advertising on OTT. A recent study from The Trade Desk found that 89 percent of Southeast Asian viewers will watch ads in exchange for free programming.\*

The results are clear - premium video

channels like OTT should be an essential part of every advertiser's toolkit. Consumers trust these platforms and as such are more receptive to ads on them.

*"From a planning perspective, this research certainly supports GroupM's view that OTT should be considered as part of the TV plan alongside the linear schedule as a way to driving wider marketing goals (uplift in awareness), rather than it being measured using digital metrics like completions & click throughs."* - John Miskelly, Investment Director, Asia Pacific at GroupM. ■



**PUBMATIC** (Nasdaq: PUBM) delivers superior revenue to publishers by being an SSP of choice for agencies and advertisers. PubMatic's cloud infrastructure platform for digital advertising empowers app developers and publishers to increase monetization while enabling media buyers to drive return on investment by reaching and engaging their target audiences in brand-safe, premium environments across ad formats and devices. PubMatic operates 14 offices and eight data centers worldwide.

Find out more  
[DOWNLOAD  
THE REPORT  
HERE](#)

\*57% of Southeast Asian Viewers are now streaming more OTT video content because of Covid-19

\*89% of Southeast Asian viewers will watch ads in exchange for free programming  
<https://investors.thetradedesk.com/news-releases/news-release-details/57-percent-southeast-asian-viewers-are-now-streaming-more-ott>

## BUILDING A NEW COMMON CURRENCY OF THE OPEN INTERNET

Relevant advertising is fundamental to sustaining the value exchange of the open internet. Impressions without identity will only result in reduced efficacy for advertisers, and a race to the bottom for publishers. After more than 25 years, the cookie will finally be put to rest, and this may possibly be the best news for the open internet.

A year ago, I introduced Unified ID 2.0 (UID 2.0) in the Asia Video Industry Report 2021.

### Unified ID<sup>2.0</sup>

UID 2.0 is a new industry-wide approach to internet identity that preserves the value of relevant advertising, while putting control for consumers and privacy at the forefront. It will offer stakeholders a modern, common currency for the open internet with the ability to give consumers control of their data, while allowing businesses to meaningfully reach their audiences.

The Trade Desk has been working with industry leaders on this open, industry-wide identity solution to address consumer privacy concerns, while enhancing targeting and measurement. While we continue to work on this new approach, the amount of industry support that UID 2.0 had received thus far has been incredible.

Almost the entire ad tech ecosystem has aligned behind the solution since it was announced a year ago. Index Exchange, Magnite, PubMatic, OpenX, SpotX, Criteo,

LiveRamp and Neustar are all on board. Global app developers such as Meitu, well-known for their beauty cam app are now a part of the UID 2.0 community, along with The Washington Post and its Zeus technology platform that powers over 100 other media publishers including some of the leading daily newspapers in the U.S.

Closer to home, Carousell Media Group in Southeast Asia, Cignal TV in the Philippines and Coc Coc in Vietnam have also lined up to support the initiative, ensuring the power of their content and brands are maximized in delivering outcomes for clients.

#### Cookies are non-existent in the fastest-growing parts of the internet

The cookie is an antiquated technology that was developed for use in the web browser. In reality, the cookie is increasingly obsolete. In fact, the fastest growing parts of the internet have nothing to do with cookies. Today, consumers are embracing rapidly growing channels such as video streaming via connected TV (CTV) and over-the-top (OTT), audio streaming and mobile apps. What's also interesting about these rapidly growing channels is that they largely rely on consumer email logins to create identifiers. Cookies are non-existent.

Amongst these high growth channels, the pandemic has driven a surge in OTT viewership here in Southeast Asia more rapidly than anyone had ever predicted. With nearly three in four Southeast Asian

OTT viewers expected to maintain or increase video streaming viewership after the pandemic, the need for a privacy-safe identifier for CTV and OTT like UID 2.0 is necessary.

Such an identifier will enable more relevant ads for consumers, allow brands to reach more of their target audience and enable publishers to match more of their valuable audience data and earn more for their inventory. This will help fund the amazing content that has kept most consumers sane during this pandemic. Importantly, the current TV content arms race cannot be financially sustained for providers or consumers without relevant ads.

For the numerous OTT players in Southeast Asia, one of the biggest challenges they face is their lack of scale against the walled gardens. It is important to remember that part of what made cookies so useful is they were the industry standard. Everyone — brands, publishers, ad tech companies — used them. This is why it is critically important for both TV publishers and OTT players to collaborate as they look to win a greater share of advertising revenue, which in turn will allow them to reinvest and produce more premium TV content. With ad-supported streaming poised to be the winning business model in this region, laying the foundation for such industry cooperation is vital for all TV streaming players to prosper in the long run.

#### United as one is the winning strategy

Advertisers clearly recognise consumers' shift towards CTV and OTT. In the last

year, we've seen brands around the world embracing data-driven advertising on platforms such as ours more aggressively than before. Unsurprisingly, CTV and OTT were the strongest growth channels on our platform as advertisers look to apply data to video campaigns in ways that are simply not possible via traditional channels, such as linear TV.

Around the world, broadcasters are also innovating for the new world of identity. Not too long ago, we announced our collaboration with OpenAP and Blockgraph. Both of these companies are owned by some of the largest TV networks in the United States and they have announced that their identity technology will be interoperable with UID 2.0. We now have an opportunity to create a common currency, which will act as the critical identity backbone for the broadcast industry. Now is the time for TV publishers to act collectively to avoid a fragmented ecosystem that plays into the hands of the walled gardens, and brands need to move quickly to build first-party consumer connections that can be scaled across the open internet.

There is a better path forward and if we get this right, I believe we are on the right path, and everyone wins. ■



by Bihao Pan

Lead Senior Director, Inventory Partnerships, The Trade Desk

**The Trade Desk™** is a technology company that empowers buyers of advertising. Through its self-service, cloud-based platform, ad buyers can create, manage, and optimize digital advertising campaigns across ad formats and devices. Integrations with major data, inventory, and publisher partners ensure maximum reach and decisioning capabilities, and enterprise APIs enable custom development on top of the platform.





## AGNES ROZARIO

DIRECTOR, CONTENT



### Championing Local Entertainment and Originals

Very early on Astro made the decision to embark on the ambitious journey of creating local content as a key differentiator whilst becoming a major aggregator of international content. The main challenge was the multi-ethnic, multi-cultural and multi-lingual profile of Malaysians but we persevered starting off with *Roda Impian*, the local Malay adaptation of *Wheel of Fortune* and *Miss Malaysia Chinese International Pageant* and soon after the hit *Akademi Fantasia* which went on for 13 seasons and made stars of many. Local children's productions filled the first dedicated kids channels in the country, Astro Ceria, the first 24 hours Malaysian news channel, Astro AWANI and the Hua Hee Hokkien content franchise. Having built our skills at live and entertainment shows we saw an opportunity for comedy and created the popular and enduring *Lawak* franchise. The time for scripted drama followed and *Suri Hati Mr. Pilot* achieved over 5 m unique viewers. We are happy to say that our local offerings are our most watched content taking up two thirds of our audience time and also underpin over three quarters of our advertising revenue.

A key driver of our creative team is to be trend setters. From entertainment IPs to scripted shows, this is a common thread

that sets the tone for each production, always improving on the previous season. The under-developed local film industry also presented the opportunity for us to change the local film landscape and its marketing, driving us to produce films like the box office hits *OlaBola* and *The Journey*. To date we have been involved in 90% of the top 20 local films of all time, which include *Hantu Kak Limah*, *Polis Evo* and *Paskal*. We have built capabilities to ideate, develop and create original IPs and have become the biggest content producer in Malaysia, producing over 9,000 hours of local content annually across multiple genres, scripted and unscripted.

The hiatus from production brought on by the pandemic in 2020 forced us to re-think our slate, our ideation process and planning with contingencies upon contingencies required, but staying true to our mantra of being ahead of the curve. We adapted quickly to the new normal and resumed production with a bigger *Gegar Vaganza Season 7*, *Anugerah MeleTOP ERA 2020* and *Big Stage 2020*, garnering millions in TV viewership. We also launched a new signature series, *The Masked Singer Malaysia*, planned entirely during the pandemic, and strengthened our comedy line-up with the weekly *SepahTu Reunion*. In the scripted space our ambition was to create originals of high production value and edgier storylines. With the brilliant Mamat Khalid we extended the character universe of Malaysia's #1 film comedy franchise to create the hit *Kampung Pisang Bersiri-siri*. Our next original hit *Projek: Anchor SPM* with its bold storyline resonated with a

new audience i.e. digital natives and continues to create talkability. The buzz-worthiness is evidenced in our upcoming originals, *i-Tanggung* and *The Maid 2*, the sequel to the hit *The Maid*. We also remain attentive to our loyal audience and through our collaboration with Siti Rosmizah, *Rindu Awak Separuh Nyawa* became Malaysia's No.1 drama in 2021.

All this in addition to international content, live sports and the endless content choices of streaming partners, Disney+ Hotstar, iQIYI, HBO GO, TVBAnywhere+ and soon to be added Netflix and more to come, make Astro's content offering rich and relevant for all Malaysians.

Moving in tandem with Astro's on-going transformation to be Malaysia's No.1 Entertainment Destination are our innovations in our products including the 4K UHD Ultra Box, and the Ultra Plug & Play Box, which will aggregate all of the above in one box and provide a seamless experience across all screens.

We are excited about our future which will bring a new Astro experience, broadband offerings and of course non-stop content. ■



### Astro Malaysia Holdings Berhad (Astro)

is Malaysia's leading content and entertainment company, serving 5.7 m homes or 73% of Malaysian TV households, 6,400 enterprises, 16.8 m weekly radio listeners (FM and digital), 14.3 m digital monthly unique visitors and 3.0 m shoppers across its TV, radio, digital and commerce platforms.



## JON PENN

EXECUTIVE VICE PRESIDENT, ASIA-PACIFIC

**BBC**  
**STUDIOS**

### Television - Welcome to the New World

Alongside natural disasters and armed conflicts, pandemics are usually listed in commercial contracts as possible “force majeure” events. To meet the definition of force majeure, these events need to be unforeseeable, external and irresistible and by that definition, are extremely unlikely to occur. Yet in 2020 and moving into 2021, as we know, one did occur and continues to impact everything. As I write this note in Sydney, where I’m based, the city has just registered over 600 cases in the past 24 hours of the extremely infectious Delta strain of the virus, which two months ago seemed unimaginable. We’d returned to the office and production was back in full swing, but now the city is in a hard lockdown and who knows how the rest of the year will unfold.

The impact of the pandemic on the media and entertainment industry has been seismic. It genuinely feels like the very ground has moved from under our feet. One big trend is the move to globalisation of content production and delivery. Lockdown and stay-at-home orders have caused many people to take up SVOD subscriptions and other new services that they might not otherwise have trialled. This growth, amplified by the effects of the pandemic, is one of the reasons why we have seen major

players like Disney largely exiting its Asian channel business and HBO increasingly seeking opportunities to prioritise HBO Max. As content “routes-to-market” change it also causes some traditional distribution businesses to pivot to new streaming services of their own leading to Discovery’s focus on Discovery + and BBC Studios to launch BritBox, in collaboration with ITV Studios in the US, Canada, Australia and now South Africa.

Explosive growth in new streaming services, never more pronounced than during the pandemic, has caused the cost of content production to sky-rocket as producers and talent respond to increased competition, extracting greater economic value for their work. When content costs more, producer-distributors need to increase their returns. This new financial imperative is upending the traditional time and platform based global content windowing system.

But many other entertainment services also seem to be benefiting from increases in demand and quality of content. The Chinese tech giants bilibili and ByteDance saw rapid growth last year, with bilibili reporting a 55% increase year-on-year to 202 m monthly active users (MAUs) in 2020 and ByteDance reporting an incredible 1.9 bn MAUs across all its

platforms. In India, direct-to-consumer SVOD subscribers are predicted to continue their growth momentum, increasing by 1.6 times to 89 m by end-2021, according to Media Partners Asia’s ‘The Future of India’s Online Video Market’ report.

In Australia, Foxtel has just announced about 4 m subscribers to all of its services including the relatively new SVOD services Binge and Kayo. A new pay-TV content ecosystem has been born. And the

Australian television advertising spend is reported to have grown by 5.7% in the first quarter of this year compared to the same time last year, largely helped by the networks’ BVOD services.

This globalisation of content trend, entrenched by the pervasiveness and duration of the global pandemic is set to continue as customers like the choice and control they now have over what they pay, what they get and how they consume it. There appears to be no going back. ■

**BBC Studios**, a global content company with bold British creativity at its heart, is a commercial subsidiary of the BBC Group. Able to take an idea seamlessly from thought to screen and beyond, its activities span content financing, development, production, sales, branded services and ancillaries across both its own productions, and programmes and formats made by high-quality UK independents.





## SUNIL RAYAN

PRESIDENT & HEAD, DISNEY+ HOTSTAR



### A Perfect Marriage of Content & Technology is the Secret Sauce for an OTT's Success

*"The centuries-old human need for great storytelling would endure for generations to come, enhanced by new technologies that would bring these tales to life in extraordinary ways."* These words by Walt Disney spoken in 1956, hold true, even today - 65 years later.

We at Disney believe that there are two pillars of a winning strategy – content and technology. Gone are the days when any entertainment powerhouse could emerge as the preferred brand solely based on great content or storytelling. In today's direct-to-consumer world, technology plays an equal role in navigating competition, reaching target audiences and providing a magical experience to the end-user by enabling great content experience.

No wonder the lines between media and technology companies have not just blurred but obliterated. Leading media and entertainment companies, including us, are often asked whether they are a content or a tech company. It's a justified question, given that nearly all media companies today have transcended their traditional boundaries and are using technology as a medium

to solve and enhance product offerings. At Disney+ Hotstar, we have an equal focus on creating groundbreaking content and building innovative tech solutions in-house.

Creating gripping content always requires a captivating script with well-etched characters that challenge conventions. However, the critical first step actually comes prior, with data-backed insights and themes to understand our audience, thereby influencing content perspectives. There are multiple examples where we used these insights and differentiators to help create groundbreaking content. One such example was the demand for strong empowerment stories relatable to modern women. This helped us prioritise mature storytelling in *Out of Love*, *Aarya* and *Hundred*, which portray unconventional women on different journeys of empowerment. Another example was understanding the cricket enthusiasts in our audience, given the amount of cricket on our platform. This helped us launch our first original show *'Roar of the Lion'*, after gauging a keen interest in the IPL team Chennai Super Kings and its captain M.S. Dhoni.

These content choices have helped influence an exciting content catalogue which really caters to our audiences. However, we know this needs to go hand in hand with a great content consumption experience, which we have a maniacal focus on enabling through our product. So, we're getting together the best technological minds to help us build the future of video, with innovations that help create a magical user experience. For instance, while watching live cricket on the app, our customers can chat with their friends on text or video, or even order food - all without leaving the app. For the Tamil, Telugu and Malayalam variants of the reality show *Bigg Boss*, viewers

could vote for their favourite participants directly on the app. Such innovations enable a greater degree of interactivity between the user and content, which in turn, build brand affinity.

So, to circle back - when we get asked if we're a content or tech company, our answer is we are both - we make riveting content and product experiences. Whether it's with *Aarya* receiving International Emmy nominations, or the increasing number of patents being granted for our product - we look to define the way forward for the industry. Or if I may quote Star Trek, "To boldly go where no man (OTT) has gone before". ■

**Disney+ Hotstar** (erstwhile Hotstar) is one of India's largest premium streaming platforms that has changed the way Indians experience entertainment - from their favourite series and movies, to sporting extravaganzas. With the widest range of content in India, Disney+ Hotstar offers more than 100,000 hours of top-quality entertainment including original series from Hotstar Specials, blockbuster movies releases with Disney+ Hotstar Multiplex, access to world's best international content, STAR network serials before television, live sporting action, and more!





**ALEXANDRE MULLER**  
MANAGING DIRECTOR ASIA-PACIFIC  
**TV5MONDE**

### Streaming vs Linear

Being able to choose to watch what you want & when you want has been one of the main reasons why consumers turn to OTT. The rise of OTT VOD services is the answer to many viewers' concerns - being too busy or too impatient to sit down and watch a show or wait until its designated air time.

If initially VOD was just the modern adaptation of video cassettes or digital video recorders (DVR), it has now become a huge source of choice and exclusive content, Netflix being the perfect example. If OTT services satisfy customers, it also appeals strongly to content owners. It allows them to rapidly reach many viewers, often in countries outside the broadcasters' core audience, thus creating new licensing opportunities. This leads to an ever-increasing number of VOD offers and new exclusive content to differentiate them from one another.

But this profusion of choice on VOD (would it be Ad-supported or by subscription) has its cons, turning a relaxing and entertaining experience into what can, sometimes, be a burden. With so much available content to choose from, especially for those of us with multiple OTT services, this "burden of

choice" has turned a laid-back experience into a time-consuming and more stressful one. Choosing what you want to watch may take longer than watching it if you ever reach a decision.

Therefore, and in line with what we have seen during the lockdowns in most countries around the planet, viewers return to their old laid-back streaming habits after the initial overconsumption of their preferred VOD content.

Linear streaming services, free (FAST<sup>1</sup>) or pay (vMVPD<sup>2</sup>), are definitely on the rise. The number of monthly active users on FASTs services (Pluto TV, Tubi or Peacock) or subscribers of vMVPDs (e.g. Sling TV, Hulu Live, YouTube TV) is increasing. Some analysts predict that the subscription of streaming services (including VOD and vMVPDs) in the US will take over traditional pay-TV by 2024.

Having launched TV5MONDE's first linear streaming service in the region back in 2002 for the Japan-Korea's Football World Cup, the company has been one of the first to believe that OTT was not just all about VOD. And just as video cassettes and DVDs have now been fully digitalized into OTT services, linear TV will also follow

the same path. As a content provider, I have always seen technology as a new way to reach new audiences. The idea is not to replace traditional pay-TV with OTT but to offer the public the choice to decide "how" they want to receive the content. Technology and new distribution means are just enlarging the pie and thus offering new opportunities and possibilities.

As far as "what" and "when" are concerned, TV5MONDE added the VOD feature to the initial streaming linear TV service a while ago as we want the end-user to be fully in control. TV is entertainment, and you should always have the option to sit back, relax and watch a good programme with no hassle. So the question is not streaming vs linear, but linear on streaming! ■

- 1 Free Ad-Supported Streaming TV
- 2 Virtual Multichannel Video Programming Distributor

**TV5MONDE** is the world-leading general entertainment TV network, broadcasting in French 24/7 and offering a wide variety of subtitled primetime films, in-depth coverage of international news, live sports events, high-quality documentaries and magazines, cartoons and lifestyle programming. Available in more than 400 m households in 198 countries and territories, TV5MONDE has 11 channels subtitled in 14 languages. It also offers a standalone over-the-top service available on any device for the Asia Pacific region.





**JANICE LEE**  
 CHIEF EXECUTIVE OFFICER, VIU  
 & MANAGING DIRECTOR, PCCW MEDIA GROUP



**Being Relevant**

We believe in the power of stories. We are synonymous with the characters and stories being shared; and we are synonymous with the fans... because we're fans too. Since our launch in 2015 we have always been committed to this promise of bringing the best of content to our Viu-ers. We have continuously expanded our offerings and delivered content that is tailored to the needs of an expanding population of online viewers in the region. We take pride in our ability to provide highly entertaining content to our audiences through a diverse selection of Asian content, from fresh dramas including romance, comedy, fantasy, thriller, crime and suspense to variety shows, movies, anime, music and more, mainly from Korea, China, Japan, Hong Kong and Thailand.

Our content strategy is to be locally relevant to our consumers. We invest in local content, relevant international content localized for the country and an investment in Viu Originals. In 2021 we released popular and premium Asian content such as the much-anticipated k-dramas like all seasons of *Penthouse*, *Sell Your Haunted House* and *Taxi Driver* as well a slate of Viu Originals including *Black* (S2) and *Keluarga Baha Don* (S3) in Malaysia,

*Close Friend* and *Bite Me* in Thailand and *Ubettina Wethu* in South Africa to name a few, which were also amongst the most popular content on our platform. Apart from licensing, this year we started investing into Korean Viu Originals. We have released 3 Korean Viu Originals thus far in 1H2021, *River Where the Moon Rises*, *Doom at Your Service* and *Lovers of The Red Sky*. One of the most anticipated Korean drama, also a Viu Original, *Now We Are Breaking Up*, starring Song Hye Kyo and Jang Ki Yong, will launch this November.

One needs to accept that the digital entertainment space is evolving. From the mix of players to the content offerings, we have seen several changes. We have seen an accelerated adoption of online viewing by consumers and this behaviour is irreversible. At Viu, learning from our users plays a key part in our success. The focus is to continually improve our service and evolve with the consumer's needs, by building insights from how they interact with our service and engage with our content. The journey starting from the top of the funnel in terms of acquisition, to the overall user experience aimed at increasing engagement and retention, all play a critical path in being relevant to our users.



*Now We Are Breaking Up*

With a robust ecosystem and more choices available to consumers, online viewing has become mainstream. Users are now open to engaging with more than one service as long as each service offers a distinctive value to fulfil their various entertainment needs. In the pre-OTT days, consumers were getting their content from many sources, but now in the form of apps, directly on their mobiles, it has changed how the new generation consumes content.

Personalization is the new mode of consumption.

For service providers like ourselves, this is an opportunity for expansion of the addressable market base since OTT services cater to individuals and mobile/connected devices vs single households. We understand Asia is not one region hence our aim is to continue to be frontrunners in the digital entertainment space in Asia and create a service in Asia for Asia. ■

*Viu is a leading pan-regional over-the-top (OTT) video streaming service operated by Viu International Limited. The Viu service is available to consumers through a dual model with an ad-supported free tier and a premium subscription tier. Viu offers fresh premium TV series, movies and lifestyle programming in local and regional languages and subtitles in different genres from top content providers, as well as premium original productions under the brand "Viu Original".*



## CATHERINE PARK

SVP, HEAD OF OFFICE & STREAMING, ASIA  
VIACOMCBS NETWORKS INTERNATIONAL

VIACOMCBS

### Streaming is Paramount

Firstly, I'd like to say how thrilled I am to be joining ViacomCBS at such an exciting time. There has been much innovation in Asia and we see many opportunities to grow the ViacomCBS business further through consumer products, location based entertainment, content production via ViacomCBS International Studios (VIS), and of course streaming, streaming, and streaming – which we believe is one of the best ways to bring our content to even more viewers.

ViacomCBS' ambition is to become as powerful a player in streaming as we are in television by optimising our portfolio across free, premium, and pay. Our streaming services leverage our vast content library, of which a large percentage is owned and accessible, and continues to grow with an average content spend of USD15 bn a year so that we grow our subscribers and own their bigger time spend on us.

With an unrivalled global footprint, powerful content engine, immense library and a vast pipeline of premium originals, ViacomCBS is well-positioned to move in on streaming opportunities. Pluto TV, our FAST service, is a leader in the space, delivering hundreds of live linear channels

and thousands of titles on-demand to a global audience of over 52 m monthly active users. On the SVOD front, we have already reached our goal of launching Paramount+ in 25 markets this year, aiming for 45 markets by end of 2022. In Asia, we're focusing on opportunities especially in North Asia and Southeast Asia, with partnerships being key to our roll-out.

One of ViacomCBS' strengths is in combining the power and appeal of our iconic, culture-defining brands, and we are doing this with Paramount+, our premium SVOD service. This is truly a Mountain of Entertainment with originals, premium global series and international hits from our entertainment brands – Showtime, CBS, MTV, Comedy Central, Nickelodeon, BET, and Smithsonian Channel – as well as movies and blockbusters from Paramount Pictures, DreamWorks Animation and Miramax classics. In some markets, such as the US, Paramount+ also includes news and sports; the offering will vary from market to market, to cater to different business needs and audience appetites.

We have been priming our markets and laying the foundation for Paramount+



Trevor Noah, Ronny Chieng on *The Daily Show*  
©Sean Gallagher



Optimus Prime and Bumblebee in *TRANSFORMERS: THE LAST KNIGHT*, from Paramount Pictures.  
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in Asia, for example with the rebrand of Paramount Channel to Paramount Network as a supersized entertainment offering. True to the Paramount brand which is synonymous with great entertainment, there is something for everyone – blockbusters from the *Mission: Impossible* and *Transformers* franchises; global hits *NCIS: New Orleans*, *FBI* and *The Good Wife*; first and exclusive dramas *Yellowstone* and *The Bite*, short-form series *Star Trek: Short Treks*, as well as first and exclusive comedy fare like *The Daily Show*, *Saturday Night Live* & *The Neighborhood* on the Comedy Central Happy Hours block. We're very happy with the momentum the brand is seeing in Asia. With four new launches in October, Paramount Network is now in 26 markets in the region.

While we accelerate streaming plans, linear continues to be a core part of the business. It complements our streaming products and efforts and helps reinforce three factors that are essential to our strategy for success in streaming: must-see content, strong brands, and ubiquitous distribution. To this end, we remain absolutely committed to supporting our affiliate partners and their

business, and we continue to back our brands with investment in content, strong marketing campaigns, as well as events and experiences that deepen connections with our fans.

Our Studios business is also a driver for streaming. VIS is being built up as a content powerhouse that will help serve the demands for content on any platform, whether our own, for partners, or third parties. We currently have more than 160+ projects in development from over 20 countries worldwide, and over 60 titles in production globally including projects from Singapore, Thailand, and Korea. Here, again, partnerships are key – we are very keen to work with local partners, whether on locally produced original content or localisation of hit global IPs.

The next phase of the global Paramount+ roll-out is already in the works. We have several on-going discussions with potential telcos and MVPD partners, and look forward to many more to bring The Mountain and our streaming ecosystem to Asia. Exciting times ahead! ■



## TELEVISION AUDIENCE MEASUREMENT 2021-2022

MARKETS	RESEARCH COMPANY	PEOPLEMETER PANEL SIZE (HOMES/HOUSEHOLDS)	RETURN PATH DATA (RPD) PANEL	PANEL COVERAGE	CABLE/ SATELLITE MEASURED	DTT MEASURED	INTERNET, TABLETS & SMARTPHONES	VOD &/OR OTT SERVICES MEASURED	COMMERCIAL BREAK RATINGS FOR PAY-TV CHANNELS	COMMERCIAL SPOT LOGS FOR PAY-TV CHANNELS	PAY-TV REACH & FREQUENCY AVAILABLE	TIME SHIFT VIEWING MEASURED	SOFTWARE
AUSTRALIA	Nielsen TAM on behalf of OzTAM	5,250 (Metropolitan) 2,120 (National subscription TV)	No	Metro areas (5 cities) & nationally for Subscription TV	Yes	Yes	No	National Video player data reported separately	No	No	Yes	Yes	User choice*
	Nielsen TAM on behalf of Regional TAM	3,198 (Regional)	No	Queensland, Northern NSW, Southern NSW, Victoria, Tasmania & Regional Western Australia	Yes	Yes	No	No	No	No	Yes	Yes	User choice*
CAMBODIA	Kantar Media	795 Homes (Diaries)		Phnom Penh, Siem Riep & Battambang	Yes	Yes	No		Yes	Yes	Yes		Instar Analytics
CHINA	CSM	37,350	National panel: 500,000 Smart TV Device & 52 City panel: 200,000 Smart TV Device	1 national meter panel, 78 city meter panels, 12 provincial meter panels, 39 diary city panels, 13 diary provincial panels	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Infosys+
HONG KONG	CSM & Kantar Media	1,000	No	HK Region	Cable-Yes Satellite-Yes, limited to monitoring list of AMS channel*	Yes	From 2019	Yes	No	No	Yes for subscribers	Yes	Instar Analytics
	CSM Media Research		2,000 homes	HK Region; Now TV subscriber base	Yes (Now TV channels only)	No	Yes	Yes	No	Yes	Yes	Yes	Instar Analytics
INDIA	BARC India	44,000	Feasibility studies underway with multiple operators	All India (Urban + Rural)	Yes	No	No	No	Yes	Yes	Yes	Yes	Yumi Analytics
INDONESIA	Nielsen	2,418 (Terrestrial) 640 (Pay-TV)	2,000 panel for Indohome (UseeTV) - exclusive	Terrestrial: 11 cities Pay-TV: 11 cities	Yes	Yes	Yes, in Digital Ad Ratings (DAR) & Total Ad Ratings (TAR)	No	No	Yes	Yes	No	Arianna
JAPAN	Video Research Ltd	10,700 household (sample age>4)	No	32 regions including Kanto, Kansai, Nagoya, Fukuoka, Sapporo, Sendai, Hiroshima, Shizuoka, Nagano, Fukushima, Nigata, Okayama&Kagawa, Kumamoto, Kagoshima, Nagasaki, Kanazawa, Yamagata, Iwate, Tottori&Shimane, Ehime, Toyama, Yamaguchi, Akita, Aomori, Oita, Okinawa, Kochi, Yamanashi, Fukui, Tokushima, Saga, Miyazaki	Yes	No	No	No	No	No	Yes	No	cs/NEX

Survey Notes: Japan, Video Research Ltd: Peoplemeters in Tokyo & Osaka. Non-continuous measurement, 2 week sweeps conducted every two months (12 weeks/year). Subscription TV panel is separate from national terrestrial TV panel of 5,100 homes, 52 weeks reporting/year

\*1 : Tokyo 30km area \*2 : main area, 5 Pref. \*3 : main area of Chukyo, 3 Pref. \*4 : main area of northern Kyushu \*5 : Sapporo city

## TELEVISION AUDIENCE MEASUREMENT 2021-2022

MARKETS	RESEARCH COMPANY	PEOPLEMETER PANEL SIZE (HOMES/HOUSEHOLDS)	RETURN PATH DATA (RPD) PANEL	PANEL COVERAGE	CABLE/ SATELLITE MEASURED	DTT MEASURED	INTERNET, TABLETS & SMARTPHONES	VOD &/OR OTT SERVICES MEASURED	COMMERCIAL BREAK RATINGS FOR PAY-TV CHANNELS	COMMERCIAL SPOT LOGS FOR PAY-TV CHANNELS	PAY-TV REACH & FREQUENCY AVAILABLE	TIME SHIFT VIEWING MEASURED	SOFTWARE
MALAYSIA	Nielsen	1,100 TV Households in Peninsular Malaysia	No	Across 11 states in Peninsular Malaysia, covering both urban and rural	Astro Pay-TV & Njoi (Free Sat)	Yes	Yes, Digital Ad Ratings (DAR) inclusive of Desktop & Mobile	No	No	No	Yes	No	Arianna
	Kantar		4,000 homes	Across all 13 states in Peninsular & East Malaysia, covering urban & rural	Yes (Astro Pay-TV)	No		Q1 2018	Yes (all channels)	Yes (all channels)	Yes	Yes	Instar Analytics
MYANMAR	Nielsen Media Myanmar	1,000+ HH Diary Panel 6,000+ Individuals	No	6 Key Cities within metro & urban	Yes	Yes	No	No	Yes	Yes	Yes	No	Arianna
NEW ZEALAND	Nielsen	900 households (2,250 panel members)	No	National	Yes	Yes	Yes, in Digital Ad Rating (DAR) and Digital Content Rating (DCR)	No	Yes	Yes	Yes	Yes	Arianna/ eTAM (2021)
PAKISTAN	Medialogic Pakistan	1,800 Homes	In process	Top 26 Cities Incl. 3 Metros	Yes	N/A	No	No	Yes (100+ channels)	Yes (97 channels)	Yes	No	Instar Analytics
PAKISTAN	Gallup Pakistan	National Diary Panel: 2,500 HH, 3,500 Individuals (2,000 Urban HH & 500 Rural HH)*		National (Urban+Rural)	Yes	N/A	No	No	Yes	No	Yes	No	Reporter
PHILIPPINES NATIONAL	Nielsen	National Panel: 3,500 (2,000 Urban homes (NUTAM) & 1,500 Rural homes (RTAM))	No	National (Urban+Rural)	Yes	Yes	Yes, in Digital Ad Ratings (DAR) & Total Ad Ratings (TAR)	No	Yes	Yes	Yes	No	Arianna
PHILIPPINES METRO	Nielsen	Metro Panel 1,950 (1,150 Mega Manila homes (MEGATAM) and 800 homes for 6 other Metros (MCTAM))	No	Metro Cities	Yes	Yes	Yes, in Digital Ad Ratings (DAR) & Total Ad Ratings (TAR)	No	Yes	Yes	Yes	No	Arianna
PHILIPPINES	Kantar	National Panel: 1,900 homes		National (Urban + Rural)	Yes	Yes, part of TAM panel			Yes	Yes	Yes		Instar Analytics
SINGAPORE	GfK	1200 households and 2100 individuals on PC/tablets/mobile devices	No	National	Yes	Yes	Yes	No	No	No	Yes	Yes (up to 28 days)	Evogenius
	Nielsen for StarHub SmarTAM	-	Panel: 5,000 homes Census: 306,000 homes	StarHub TV Subscriber base	Yes	No	No	Yes for VOD	Yes	Yes	Yes	Yes	Arianna/ eTAM

## TELEVISION AUDIENCE MEASUREMENT 2021-2022

MARKETS	RESEARCH COMPANY	PEOPLEMETER PANEL SIZE (HOMES/HOUSEHOLDS)	RETURN PATH DATA (RPD) PANEL	PANEL COVERAGE	CABLE/ SATELLITE MEASURED	DTT MEASURED	INTERNET, TABLETS & SMARTPHONES	VOD &/OR OTT SERVICES MEASURED	COMMERCIAL BREAK RATINGS FOR PAY-TV CHANNELS	COMMERCIAL SPOT LOGS FOR PAY-TV CHANNELS	PAY-TV REACH & FREQUENCY AVAILABLE	TIME SHIFT VIEWING MEASURED	SOFTWARE
SOUTH KOREA	Nielsen	4,170	No	National	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Arianna
	TNMS	3,200	10,000	National	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Infosys
SRI LANKA	Kantar	650 Homes ~ 2,350 Individuals	No	National	Yes	Yes	No	No	No	No	No	No	Media Xpress
TAIWAN	Nielsen	2,000	-	National	Yes	Yes	No	No	Yes	Yes	Yes	No	Arianna
TAIWAN (MOD)	Nielsen	-	15,000	MOD subscriber base	No	No	No	No	Yes	Yes	Yes	No	Arianna
THAILAND	Nielsen	2,400	No	National	Yes	Yes	Yes in Digital Ad Rating (DAR) & Digital Content Rating (DCR)	No	Yes	Yes	Yes	Yes, in Digital Content Rating (DCR)	Arianna, Dashboard for DCR, DAR
VIETNAM	Kantar Media	National TAM (PM) 2,310 homes		National 4 cities subset	Yes	Yes	No		Yes	Yes	Yes		Instar Analytics

**Survey Notes:** **Australia**, OzTAM and Regional TAM: Peoplemeter/OzTAM: 5 City Metro Markets: Sydney, Melbourne, Brisbane, Adelaide & Perth & Nationally for Subscription **Australia**, TV/RegionalTAM: Queensland, Northern NSW, Southern NSW, Victoria, Tasmania and Regional Western Australia Australia, User Choice\* Gold Standard accredited software suppliers for OzTAM & RegionalTAM Data - TV Map (Broadcast M.A.P), R8ting Library for MediaWise (Day 8 Technology), AdQuest eTAM (Landsberry & James), Pinery (MediaCom) OzTAM only, Arianna (NielsenTAM), TARDIIS (Starcom MediaVest Group), AdvantEdge (TechEdge) **Indonesia**, Nielsen: Terrestrial & Pay-TV: 11 cities: Jakarta, Surabaya, Medan, Semarang, Bandung, Makassar, Yogyakarta, Palembang, Denpasar, Banjarmasin and Surakarta. **Japan**, Video Research Ltd: Peoplemeters in Tokyo & Osaka. Non-continuous measurement, 2 week sweeps conducted every two months (12 weeks/year). Subscription TV panel is separate from national terrestrial TV panel of 6,600 homes, 52 weeks reporting /year. **Myanmar**, Nielsen MMRD: Diary Panel, covering in 6 Key Cities within Metro and Urban (Yangon, Mandalay, Nay Pyi Taw, Taunggyi, Magway, Mawlamyine) **Pakistan**, Medialogic: 20 cities - Karachi, Lahore, Islamabad, Rawalpindi, Faisalabad, Multan, Hyderabad, Sukkur, Gujranwala, Bahawalpur, Peshawar, Sheikhpura, Saikot, Pakpattan, Jehlam, Kohat, Mardan, Larkana, Dadu and Quetta **Pakistan**, Gallup Pakistan:

National diary panel include all 3 Metros (Karachi, Lahore, Islamabad/Rawalpindi: 2,100 individuals), 5 Large Cities (Faisalabad, Hyderabad, Multan, Peshawar, Quetta: 1,100 individuals), 10 Small Cities & Towns (Gujrat, Jacobabad, Kasur, Mardan, Pashin, Rajanpur, Rohri, Sahiwal, Sargodha, Thatta: 1,500 individuals), Rural 800 individuals **Philippines** PHINTAM (National Urban and Rural), NUTAM (National Urban), Mega TAM (Metro Manila & suburbs), MCTAM (Metro cities) **South Korea**, Nielsen: National and over 200 pay-TV channels are monitored programme names or TVC spot logs (Seoul, Incheon, Busan, Gwangju, Daejeon, Daegu, Ulsan, Gyeonggi Province, Kangwon Province, North Chungcheong Province, South Chungcheong Province, North Gyeongsang Province, South Gyeongsang Province, North Jeolla Province, South Jeolla Province, Jeju Island) South Korea, TNMS: Return Path Data panel size is 10,000 homes of KT IPTV. **Vietnam**, Kantar Media, People Meter, 1 National panel, 4 cities: Ha Noi, HoChiMinh City, Da Nang, and Can Tho, 90 TV Channels monitored Programme and TVC Spot logs. Please contact the research company for a comprehensive report on measurement.

## SYNDICATED MEDIA SURVEYS 2021-2022

MARKETS	RESEARCH COMPANY	SURVEY	SAMPLE SIZE	PANEL COVERAGE	METHODOLOGY	DEMOGRAPHICS	CAB/SAT MEASURED	DTT	SOFTWARE	REACH & FREQUENCY
HONG KONG	Nielsen	Media Index	6,000+	All area	Face-to-Face/Online	12 - 64	Yes	Yes	Clear Decisions	Yes
AUSTRALIA	Nielsen	Consumer & Media View	30,000	National	Online	14+	Yes	Yes	Clear Decisions	No
NEW ZEALAND	Nielsen	Consumer & Media Insights	10,000	National	As of Q2 2020, Recruited: CATI/Online All survey completed Online	15+	Fused with TAM data	Fused with TAM data	Clear Decisions	Yes
INDONESIA 11 cities	Nielsen	Consumer & Media View	17,000	Indonesia, 11 cities	Face-to-face/Phone interview (during Covid-19)/ Online Survey	10+	Yes	Yes	Clear Decisions	Yes
MALAYSIA Peninsular only	Nielsen	Consumer & Media View	10,000	Peninsular Malaysia Only	Face-to-face or CATI (Rural)/ Online (Urban)	15+	Fused with TAM data	Fused with TAM data	Clear Decisions	Yes
MYANMAR	Nielsen Media Myanmar	Consumer & Media View	5,300+	National	CATI (Q2 2021)	10 - 64	Yes	Yes	Clear Decisions	No
PHILIPPINES National Urban	Nielsen	Consumer & Media View	10,000	National Urban	Face-to-Face CAPI (Q1 2020) CATI-CAWI (Q2 2020)	10+	Yes	Yes	Clear Decisions	Yes
SINGAPORE	Nielsen	Consumer & Media View	4,200+	National	Face-to-face/ Online (CMV2020) Face-to-face/ Online/ CATI (CMV2021)	15+	Yes	No	Clear Decisions	Yes (Print only)
THAILAND	Nielsen	Consumer & Media View	9,000+	National	Hybrid (offline + online) CATI ( for offline during Covid-19 only)	12+	Yes	Yes	Clear Decisions	Yes
TAIWAN	Nielsen	Media Index	10,000	National	Face-to-Face/Online	12 - 65	Yes	Yes	Clear Decisions	Yes
BANGLADESH	Kantar	National Media Survey (NMS)	16,200	National	Face-to-Face	15+	Yes	No	ThinkMedia	Yes
SRI LANKA	Kantar	National Demographic & Media Survey (NDMS)	12,500	National	Face-to-Face/CAPI	6+	Yes	No	QuestPlus	No
VIETNAM	Kantar Media	Media Habit Survey (MHS)	6 Cities (Urban) 9,352 & National (exc 6 cities) 7,200	6 cities & National	Face-to-Face/ Self completed	15-54			Choices 4	Yes
CHINA	CTR	CNRS-TGI	100,000	60 1-4 tier cities	Face-to-Face/Self completed/Online	15-69				
INDIA	IMRB	India	51,000	National	Face-to-Face/ Self completed	15-55 ABC				
HONG KONG	Ipsos	Media Atlas	2,000	Hong Kong	Online/ Face-to-Face	18 - 64	No	Yes	Telmar	Yes
11 ASIA MARKETS	Ipsos	Affluent Asia	19,480	Hong Kong, Singapore, Malaysia, Taiwan, Thailand, Indonesia, Philippines, Korea, India, Australia, China	Online	Affluent/BDM/ Top Management Age 25 - 64	Yes	Yes	User choice	Yes
12 ASIA MARKETS	Ipsos	GBI (Global Business Influencer Survey)	7,064	Australia, China, Hong Kong, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand	Online	Senior business execs in companies with 50+ employees	Yes	No	User choice	Yes
14 ASIA MARKETS	GWI	GWI Core research	293,815 (annually)	Australia, China, Hong Kong, India, Indonesia, Japan, Malaysia, New Zealand, Philippines, Singapore, South Korea, Taiwan, Thailand, Vietnam	Online	16-64 year old internet users	Yes		GWI PRO Platform	Yes

## DIGITAL AUDIENCE MEASUREMENT 2021-2022

MARKETS	RESEARCH COMPANY	SIZE OF PANEL	PLATFORM COVERAGE	METHODOLOGY	CORE REPORTING METRICS	DEMOGRAPHICS	AUDIENCE SEGMENTATION (BEHAVIOUR)	MULTI-PLATFORM REPORTING	ONLINE VIDEO REPORTING	PLANNING TOOLS
AUSTRALIA	Nielsen	5,200 PC 3,250 smartphone 900 tablet	PC + Smartphone + Tablet	Panel only Measurement for audiences. Engagement metrics fused with census collection from tags where applicable	Audience based metrics such as Reach, page views based metrics including pageviews per person, session based metrics including sessions per person and time based metrics including time per person	Age, Gender, Income, Education & Region	Additional segments can be explored on an ad hoc, post campaign basis subject to sufficient campaign size and panel availability	Yes	n.a.	Measurement of static content on apps and websites across multiple platforms
JAPAN	Nielsen	17,500 PC 6,300 smartphone	PC + Smartphone	Not calim based but actual log behaviour based tracking	Unique Audience (000) Active Reach (%) Total Sessions (000) Sessions Per Person Total Minutes (000) Time Per Person (hh:mm:ss) Total Page Views (000) Page Views Per Person	Age, Gender, Income, Marital Status, Education, Occupation	Additional segments can be explored on an ad hoc, post campaign basis subject to sufficient campaign size and panel availability	Total audience number report is delivered as one of element in DCR	n.a.	n.a.
NEW ZEALAND	Nielsen	2,200 PC	PC Only	Panel only Measurement for audiences. Engagement metrics fused with census collection from tags where applicable	Audience based metrics such as Reach, page views based metrics including pageviews per person, session based metrics including sessions per person and time based metrics including time per person	Age, Gender, Income, Education, Occupation, Household Size and presence of children	Additional segments can be explored on an ad hoc, post campaign basis subject to sufficient campaign size and panel availability	n.a.	n.a.	Measurement of static content on desktop apps and websites
SOUTH KOREA	Nielsen	12,000 PC 7,000 Smartphone	PC + Smartphone (Android & iOS)	Panel only Measurement for audiences	Reach, Install, Time spent, Pageview, Session	Age, Gender, Region, Occupation, Marriage, Income, Lifestyle, Education	Additional segments can be explored on an ad hoc, post campaign basis subject to sufficient campaign size and panel availability.	Yes	Yes	Measurement of static content on apps and websites across multiple platforms

## TOTAL AD RATINGS 2021-2022

MARKETS	RESEARCH COMPANY	SIZE OF PANEL	PLATFORM COVERAGE	METHODOLOGY	CORE REPORTING METRICS	DEMOGRAPHICS	AUDIENCE SEGMENTATION (BEHAVIOUR)	MULTI-PLATFORM REPORTING	REPORTING	PLANNING TOOLS
INDONESIA from September 2021	Nielsen	Nielsen TAM Panel - ~9,000 individuals Single source survey sample feeding probabilistic de-duplication model of 4,200, rising to 17,100 in Q1 2022. Nielsen Digital Ad Ratings -Facebook universe (millions) with calibration panel for Facebook Properties. Google universe (millions) with calibration panel for Google Video properties & Youtube. Open Web properties measured using Nielsen ID Probabilistic Identity Model.	TV - Nielsen TAM - 11 Major Cities TV coverage  Digital - Nielsen DAR - Desktop, Mobile (Smartphone and Tablet, Web and App)	Uses established media trading currencies in market for Television (Nielsen TAM) and Digital Ad Ratings (DAR). De-duplication factors created using a scaled media consumption survey, calibrated back to the media currencies.	Unique Audience, Impressions, Frequency, GRP, On Target % TV Only Exposure, Digital Only, TV+- Digital, Unduplicated Audience	Age and Gender	Additional segments can be explored on an ad hoc, post campaign basis subject to sufficient campaign size and panel availability.	Yes	All industry standard video and display advertising	Measurement of digital campaign Impressions, Reach, Frequency, GRP and On Target %
PHILIPPINES from September 2021	Nielsen	Nielsen TAM Panel - ~14,200 individuals Single source survey sample feeding probabilistic de-duplication model of 6,000. Nielsen Digital Ad Ratings -Facebook universe (millions) with calibration panel for Facebook Properties. Google universe (millions) with calibration panel for Google Video properties & Youtube. Open Web properties measured using Nielsen ID Probabilistic Identity Model.	TV - Nielsen TAM - National TV coverage  Digital - Nielsen DAR - Desktop, Mobile (Smartphone and Tablet, Web and App)	Uses established media trading currencies in market for Television (Nielsen TAM) and Digital Ad Ratings (DAR). De-duplication factors created using a scaled media consumption survey, calibrated back to the media currencies.	Unique Audience, Impressions, Frequency, GRP, On Target % TV Only Exposure, Digital Only, TV+- Digital, Unduplicated Audience	Age and Gender	Additional segments can be explored on an ad hoc, post campaign basis subject to sufficient campaign size and panel availability.	Yes	All industry standard video and display advertising	Measurement of digital campaign Impressions, Reach, Frequency, GRP and On Target %
TAIWAN from September 2021	Nielsen	Nielsen TAM Panel - ~7,000 individuals Single source survey sample feeding probabilistic de-duplication model of 3,145 rising to 10,000 in Q1 2022. Nielsen Digital Ad Ratings -Facebook universe (millions) with calibration panel for Facebook Properties. Google universe (millions) with calibration panel for Google Video properties & Youtube. Open Web properties measured using Nielsen ID Probabilistic Identity Model.	TV - Nielsen TAM - National TV coverage  Digital - Nielsen DAR - Desktop, Mobile (Smartphone and Tablet, Web and App)	Uses established media trading currencies in market for Television (Nielsen TAM) and Digital Ad Ratings (DAR). De-duplication factors created using a scaled media consumption survey, calibrated back to the media currencies.	Unique Audience, Impressions, Frequency, GRP, On Target % TV Only Exposure, Digital Only, TV+- Digital, Unduplicated Audience	Age and Gender	Additional segments can be explored on an ad hoc, post campaign basis subject to sufficient campaign size and panel availability.	Yes	All industry standard video and display advertising	Measurement of digital campaign Impressions, Reach, Frequency, GRP and On Target %
THAILAND from September 2021	Nielsen	Nielsen TAM Panel - ~8,000 individuals Single source survey sample feeding probabilistic de-duplication model of 6,000 rising to 9,000 in Q1 2022. Nielsen Digital Ad Ratings -Facebook universe (millions) with calibration panel for Facebook Properties. Google universe (millions) with calibration panel for Google Video properties & Youtube. Open Web properties measured using Nielsen ID Probabilistic Identity Model.	TV - Nielsen TAM - National TV coverage  Digital - Nielsen DAR - Desktop, Mobile (Smartphone and Tablet, Web and App)	Uses established media trading currencies in market for Television (Nielsen TAM) and Digital Ad Ratings (DAR). De-duplication factors created using a scaled media consumption survey, calibrated back to the media currencies.	Unique Audience, Impressions, Frequency, GRP, On Target % TV Only Exposure, Digital Only, TV+- Digital, Unduplicated Audience	Age and Gender	Additional segments can be explored on an ad hoc, post campaign basis subject to sufficient campaign size and panel availability.	Yes	All industry standard video and display advertising	Measurement of digital campaign Impressions, Reach, Frequency, GRP and On Target %

## DIGITAL AD RATINGS 2021-2022

MARKETS	RESEARCH COMPANY	SIZE OF PANEL	PLATFORM COVERAGE	METHODOLOGY	CORE REPORTING METRICS	DEMOGRAPHICS	AUDIENCE SEGMENTATION (BEHAVIOUR)	MULTI-PLATFORM REPORTING	REPORTING	PLANNING TOOLS
AUSTRALIA JAPAN	Nielsen	Facebook universe (millions) with calibration panel for Facebook Properties. Google universe (millions) with calibration panel for Google Video properties & Youtube. Open Web properties measured using Nielsen ID Probabilistic Identity Model	Desktop, Mobile (Smartphone and Tablet, Web and App) Including Youtube In-App	Panel, Survey, Census Collection from Tags, Facebook Attribution, SDK or Platform Integration	Unique Audience, Tracked Ads, Frequency, GRP, On Target %	Age and Gender	Additional segments can be explored on an ad hoc, post campaign basis subject to sufficient campaign size and panel availability	Yes	All industry standard video and display advertising	Measurement of digital campaign Impressions, Reach, Frequency, GRP and On Target % Custom Media Analytics tools available to visualise DAR data
HONG KONG INDIA INDONESIA MALAYSIA NEW ZEALAND PHILIPPINES SINGAPORE TAIWAN THAILAND	Nielsen	Facebook universe (millions) with calibration panel for Facebook Properties. Google universe (millions) with calibration panel for Google Video properties & Youtube. Open Web properties measured using Nielsen ID Probabilistic Identity Model	Desktop, Mobile (Smartphone and Tablet, Web and App) Including Youtube In-App	Survey, Census Collection from Tags, Facebook Attribution, SDK or Platform Integration	Unique Audience, Tracked Ads, Frequency, GRP, On Target %	Age and Gender	Additional segments can be explored on an ad hoc, post campaign basis subject to sufficient campaign size and panel availability	Yes	All industry standard video and display advertising	Measurement of digital campaign Impressions, Reach, Frequency, GRP and On Target % Custom Media Analytics tools available to visualise DAR data
SOUTH KOREA <small>new as of Aug 2021</small>	Nielsen	Facebook universe (millions) with calibration panel for Facebook Properties. Google universe (millions) with calibration panel for Google Video properties & Youtube. Open Web properties measured using Nielsen ID Probabilistic Identity Model	Desktop, Mobile (Smartphone and Tablet, Web and App) Including Youtube In-App	Survey, Census Collection from Tags, Facebook Attribution, SDK or Platform Integration	Unique Audience, Tracked Ads, Frequency, GRP, On Target %	Age and Gender	-	Yes	All industry standard video and display advertising	Measurement of digital campaign Impressions, Reach, Frequency, GRP and On Target % Custom Media Analytics tools available to visualise DAR data

## DIGITAL CONTENT RATINGS 2021-2022

MARKETS	RESEARCH COMPANY	SIZE OF PANEL	PLATFORM COVERAGE	METHODOLOGY	CORE REPORTING METRICS	DEMOGRAPHICS	AUDIENCE SEGMENTATION (BEHAVIOUR)	MULTI-PLATFORM REPORTING	REPORTING	PLANNING TOOLS
AUSTRALIA	Nielsen	Nielsen machine learning algorithms along with Nielsen Digital Panel	Desktop, Mobile (Smartphone & Tablet, Web & App)	Panel, Survey, Census Collection from Tags, SDK or Platform Integration	Reach, Time Spent, Page Views, App Launches, Platform, Content Type, Unique Audience, and Categories	Age and Gender	Additional segments can be explored on an ad hoc basis	Yes	Measurement of digital video and static content Reach, Time Spent, Page Views, App Launches, Platform, Content Type, Unique Audience, and Categories	Measurement of video & static content, apps, audio, etc.
JAPAN	Nielsen	Nielsen machine learning algorithms along with Nielsen Digital Panel	Desktop, Mobile (Smartphone & Tablet, Web & App)	Panel, Survey, Census Collection from SDK and Platform Integration	Reach, Time Spent, Page Views, App Launches, Platform, Content Type, Unique Audience, and Categories	Age and Gender	Additional segments can be explored on an ad hoc basis	Yes	Measurement of digital video and static content Reach, Time Spent, Page Views, App Launches, Platform, Content Type, Unique Audience, and Categories	Measurement of video & static content across web and apps
NEW ZEALAND	Nielsen	Volumetrics only (Separate panel based hybrid service in market)	Desktop, Mobile (Smartphone & Tablet, Web & App)	Census Collection from Tags & SDK	Time Spent, Page Views, App Launches, Platform, Content Type and Categories	NA	Additional segments can be explored on an ad hoc basis	Yes	Volumetric reporting for static and video content across platforms	Measurement of video and static content, apps, audio, etc.
THAILAND	Nielsen	Volumetrics only	Desktop, Mobile (Smartphone & Tablet, Web & App)	Census Collection from SDK	Time Spent, Page Views, App Launches, Platform, Content Type and Categories	NA	Additional segments can be explored on an ad hoc basis	Yes	Volumetric reporting for static and video content across platforms	Measurement of video and static content, apps, audio, etc.

## DIGITAL AUDIENCE MEASUREMENT 2021-2022

MARKETS	RESEARCH COMPANY	SIZE OF PANEL	PLATFORM COVERAGE	METHODOLOGY	CORE REPORTING METRICS	DEMOGRAPHICS	AUDIENCE SEGMENTATION (BEHAVIOUR)	MULTI-PLATFORM REPORTING	REPORTING	PLANNING TOOLS
AUSTRALIA CHINA HONG KONG JAPAN SINGAPORE TAIWAN VIETNAM	Comscore	2 million-person global human panel and extensive Comscore census network	Desktop, Mobile (Smartphone and Tablet, Web and App)	People Panel, Enumeration Survey, Server Tags, SDK	Unique Visitors, Minutes, Page Views, Visits	Age, Gender, Expanded Demographics* (depending on market and product)	Yes	Yes	Unique Video Viewers, VideoStreams, Viewing Duration, Total Minutes	Campaign Reach/Frequency, Video Reach/Frequency
INDIA	Comscore		Desktop, Mobile (Smartphone and Tablet, Web and App)	People Panel, Enumeration Survey, Server Tags, SDK	Unique Visitors, Minutes, Page Views, Visits	Age, Gender, Expanded Demographics* (depending on market and product), State Level Clusters	Yes	Yes	Unique Video Viewers, Video Streams, Viewing Duration, Total Minutes	Campaign Reach/Frequency, Video Reach/Frequency, Mobile and Multi-Platform Reach/Frequency, Plan Metrix Multi-Platform
INDONESIA MALAYSIA	Comscore		Desktop, Mobile (Smartphone and Tablet, Web and App)	People Panel, Enumeration Survey, Server Tags, SDK	Unique Visitors, Minutes, Page Views, Visits	Age, Gender, Expanded Demographics* (depending on market and product)	Yes	Yes	Unique Video Viewers, Video Streams, Viewing Duration, Total Minutes	Campaign Reach/Frequency, Video Reach/Frequency, Mobile and Multi-Platform Reach/Frequency
NEW ZEALAND	Comscore		Desktop, Mobile (Smartphone and Tablet, Web and App)	People Panel, Enumeration Survey, Server Tags, SDK	Unique Visitors, Minutes, Page Views, Visits	Age, Gender	Yes	No	Unique Video Viewers, Video Streams, Viewing Duration, Total Minutes	Campaign Reach/Frequency, Video Reach/Frequency

## DIGITAL ADVERTISING AND AUDIENCE VALIDATION 2021-2022

MARKETS	RESEARCH COMPANY	PANEL SIZE	CAMPAIGN AD FRAUD & INVALID TRAFFIC DETECTION	CAMPAIGN VIEWABILITY	CAMPAIGN BRAND SAFETY	GEOGRAPHIC AD DELIVERY
AUSTRALIA	Comscore	Internet Universe	Yes	Yes	Yes	Yes
CHINA	Comscore	Internet Universe	Yes	Yes	Yes	Yes
HONG KONG	Comscore	Internet Universe	Yes	Yes	Yes	Yes
INDIA	Comscore	Internet Universe	Yes	Yes	Yes	Yes
INDONESIA	Comscore	Internet Universe	Yes	Yes	Yes	Yes
JAPAN	Comscore	Internet Universe	Yes	Yes	Yes	Yes
MALAYSIA	Comscore	Internet Universe	Yes	Yes	Yes	Yes
NEW ZEALAND	Comscore	Internet Universe	Yes	Yes	Yes	Yes
SINGAPORE	Comscore	Internet Universe	Yes	Yes	Yes	Yes
TAIWAN	Comscore	Internet Universe	Yes	Yes	Yes	Yes
VIETNAM	Comscore	Internet Universe	Yes	Yes	Yes	Yes

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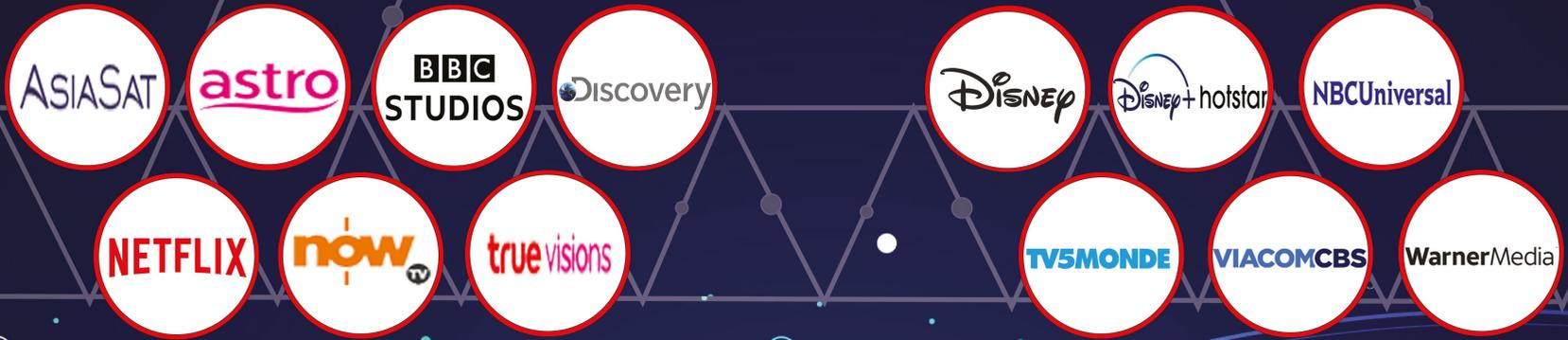
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