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**BLACK DRAGON CAPITAL<sup>SM</sup>**

# MEDIA TECHNOLOGY VISION



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## Introduction: The Digital Tsunami Continues

Throughout the world, businesses have been marking off the last 18 months as the lost year due to the COVID-19 pandemic. Bricks and mortar establishments of all types have been unable to operate at capacity since the beginning of the pandemic, facing labor shortages when not physically shut down. Our world had already been digitizing at an incredibly rate. Black Dragon Capital<sup>SM</sup>, a private equity firm has written about the digital tsunamis the world has experienced and turning our ideas into actionable investment hypotheses. The firm focuses on three sectors – fintech, ecommerce, and media technology. This paper aggregates our thinking on the future of media, specifically television. We view the Covid-19 pandemic not as a new wave of digital transformation, but as an accelerant upon trends already in motion.

For the media and entertainment sector, the past year and a half has been a mixed bag. Live and recorded productions ground to a halt for most of 2020. Cinemas were shuttered and live sports events canceled. Though people were in front of their screens at record levels, cable television subscriptions' declines accelerated with nearly seven million households cutting the cord in 2020. By 2024, eMarketer estimates that cable or satellite providers will have lost 50% of their subscribers during the preceding decade.<sup>1</sup>

A shining star for M&E has been streaming's coming out party. Though streaming's emergence began prior to the pandemic, it was dramatically accelerated by it. Disney+ was the clear winner in the new subscriptions category while Netflix maintained its healthy lead in total global subscriptions. That lead is expected to narrow with Netflix and Disney+ almost evenly splitting 60% of the US OTT market's revenue in 2023.<sup>3</sup>

What conclusions can we reach? While obvious OTT is the obvious future, does that mean big cable (Comcast, Charter, Altice, etc.) is dead? Will streaming suffer from a post-pandemic subscription hangover as consumers realize cutting the cord failed to provide the financial savings they anticipated? After decades of declaring content king, will big content finally take the revenue throne and come to dominate the entertainment industry? Or will the future of TV parallel the history of the web – a giant free-for-all with a few large whales, a couple of dozen household name brands, and an apparently unending ocean of niche players? Why does it matter so much who owns the customer relationship if everyone in the value chain is getting paid?

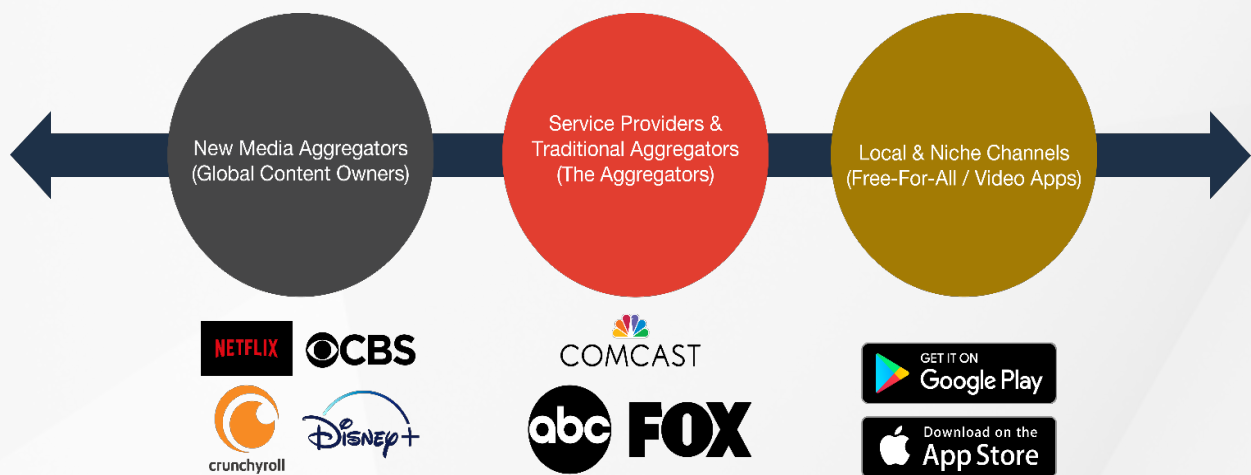
This paper does not attempt to predict the future. Instead, it presents three plausible scenarios of how the television industry might evolve:

1. First a look at television with a history and a future defined by large distributors we call the aggregators
2. Next a vision of an entertainment world divvied into walled gardens operated by mega content creators
3. Finally, an ocean-like portrayal comprised of schools of fish of different sizes, different specialties, and different strategies.

At the close of each section are the thoughts of Black Dragon<sup>SM</sup> on the needs media technology vendors must address to succeed under each scenario.

The Scenarios approach enables us to help prepare not only for the near future, where the market dynamics and their likely impact are less challenging to predict and understand, it also enables us to look beyond the typical three years planning horizon and develop strategies to survive and thrive in the everchanging M&E landscape.

The Black Dragon Capital<sup>SM</sup> scenarios are based on media providers (content owners, operators, and broadcasters) and media consumers drivers and trends shaping the future of media delivery, consumption, and media technology suppliers. The scenarios are based on expert interviews with participants spread throughout the media ecosystem.



The scenario-based approach of Black Dragon<sup>SM</sup> includes underlying trends expected to play a role in each scenario:

- The adoption of “good enough” production quality.
  - Low-cost cameras that can be left unattended, exposed to the elements, and replaced when they fail.
  - Covid-19 accelerated the acceptance of low-quality Skype and Zoom video in news and late-night programming.
- Traditional TV portals replaced by a single search and aggregation tool.
  - Apple TV and a growing number of smart TVs aggregate viewing history and make recommendations across platforms.

Many Millennials and Gen Z treat personalization and customization as table stakes to adopt a new service offering.

- Ad-tech and media tech converge
  - Content creators and owners expect easy to deploy monetization tools. New technologies and partnerships will migrate revenue generation activities earlier in the production value chain.



# Scenario 1: Return of the Aggregators

Meet the new boss... same as the old boss. The future looks a lot like the not-so-distant past with the return of some familiar names to the top of the media food chain.

## Summary

The history of television can be described as a progression of aggregators. It's 2030 and during the past decade, the media landscape has shifted again. There were neither earthquakes nor tsunamis, but the content production business has changed dramatically over the past 30 years. Content owners and creators gaze longingly back on the first decade of the OTT era and the "second golden age of Television." The media industry continues to be dominated by a few large content aggregators as it always has, but the aggregators have once again changed.

Budgets, which were never lavish even during the pioneering days of Netflix, Hulu, and Amazon Prime Video, are now tighter than ever. Content producers' yield per produced minute continues to drop.

## History Portends the Future

### Broadcast Era: 1950 - 1990

The 20<sup>th</sup> century was the era of the broadcast network. Until the 1980s the power and purse strings of the industry were held by the Big Three – ABC, CBS, and NBC. During the fall of 1986, the Big Three became the Big Four with the launch of the Fox Network. It seems quaint now that many industry insiders were not confident the ecosystem could support a fourth network, but Bart Simpson solidified Fox's place in the living rooms of America.

The network model to deliver prime time programming to the masses was simple. Networks contracted with production companies to supply content with on-air advertising footing the bill. Television was analog and linear. Every viewer had to watch the ads. The VCR briefly threatened to wreak havoc, but havoc never materialized. The audience largely wanted to watch programming live rather than recording it so they could fast forward through the commercials. Programming a VCR to record was not for the faint of heart. It might take dozens of buttons presses just to set the time. A good number of VCRs blinked 12:00 AM continuously throughout their useful life.

The networks assumed the role of content aggregators, they bought programming and sold advertising to be aired throughout the evening. With four networks divvying more than 100 million television viewing households each night, it was a very profitable business. Networks would pay top dollar for content.

## The Cable Era: 1992 – 2007

Bruce Springsteen’s “57 Channels and Nothing On” was the pop culture expression of the new television reality – cable was king. The dawn of the 21<sup>st</sup> century witnessed the rise of cable television providers like Comcast, Charter, Cox, and that had displaced the big four networks as the gatekeepers to the American living room. New business models evolved. Premium channels like HBO brought full length feature films to millions of households. Ad-supported basic channels like ESPN and CNN focused exclusively on sports and news respectively.

During the latter years of this era, HDTV debuted, DVDs supplanted VHS, and the home theater was born. Cable provider’s reign at the top of the food chain was ending.

## The Streaming Era: 2007 – 2022

In 2007 Netflix announced some of its content would be available over the Internet. Many in the television industry failed recognize this as the beginning of a tectonic shift in media consumption. In June the future should have become clearer with the release of the first iPhone. The prize was no longer the screen in the living room; it was now screening everywhere.

As Netflix transitioned from delivering DVDs to delivering streams it was also transitioning from being a pure content aggregator to becoming a content producer as well. Upstart Hulu, a coalition of News Corp, NBCUniversal, and Disney announced a similar path forward the next year.

Hulu represents a microcosm of the streaming era – it was an attempt to unify content creators and content aggregators that ultimately frayed under the weight of its founders’ self-interests as media property ownership shifted. Disney’s purchase of Fox Studios from News Corp in 2019 gave Disney increased Disney’s stake in Hulu to 60%, Comcast’s purchase of NBCU and the subsequent launch of Peacock motivated it to become a silent partner of Disney’s in Hulu in 2019, and completely exiting the partnership in 2024 – taking its content contributions with it.

Discussion of the streaming landscape cannot ignore the aftereffects of the COVID-19 pandemic of 2020-2021. The pandemic served as an inflection point for streaming. Disney+ is the poster child for sector growth. In late 2019 it forecasted 60 to 90 million subscribers by 2024. Just a little more than a year later it had already surpassed that goal. By May 2021 it upped its 2024 forecast to more than a quarter of a billion subscribers by 2024.<sup>1</sup>

Yet Disney is an outlier among content owners. In 2021 it spent \$30 billion on new content compared to \$15 billion spent by Netflix. Furthermore, Netflix must augment its offerings by licensing additional content from third parties, Disney owns a motherlode premium content it offers without incurring additional licensing costs. Disney is in an exceptional position to weather the coming era.

## 2023 and beyond

### The Return of the Giants

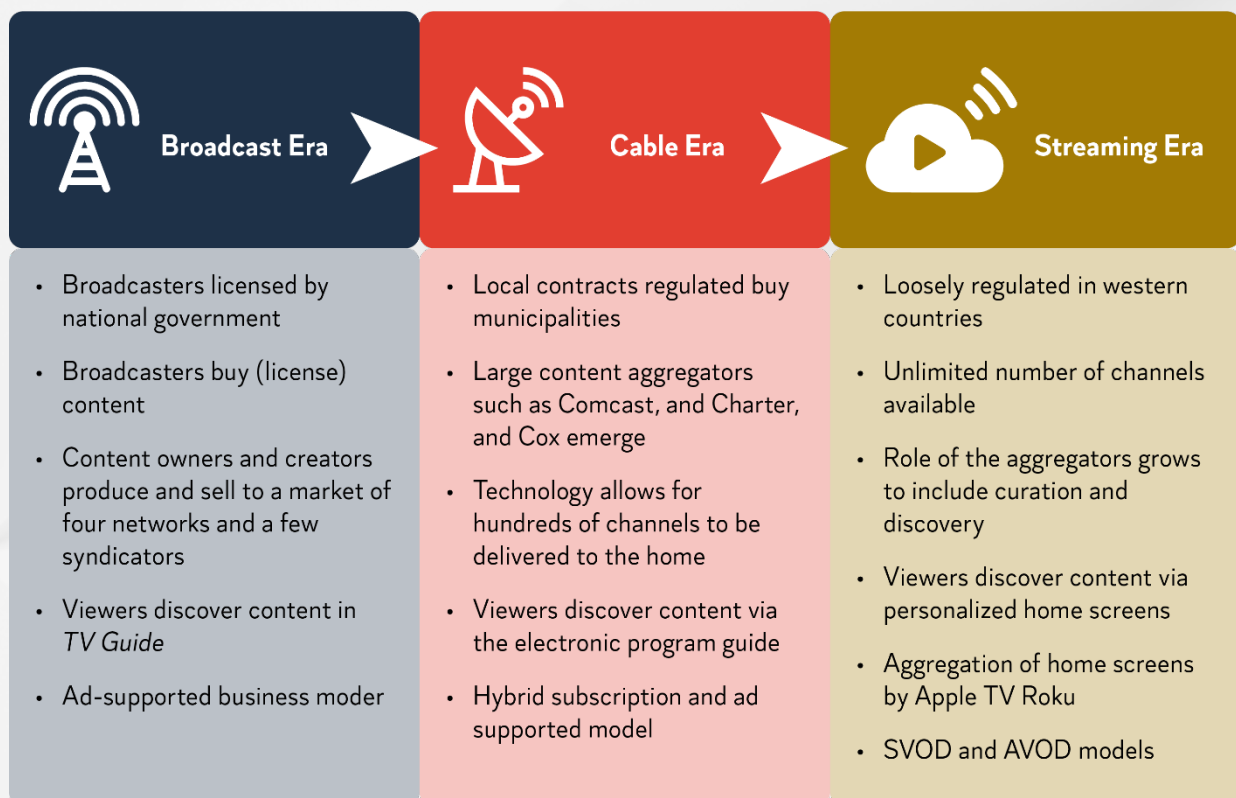
Few took notice when Comcast entered the wireless carrier business in 2017 as an MVNO. Charter (2018) and Altice (2019) followed. Who could blame America’s bleeding cable giants for

scrounging the change left under the cushions at Verizon (Comcast and Charter) and T-Mobile (Altice)? Buying bandwidth wholesale and reselling it at approximately 20% gross margin<sup>2</sup> is may not a sexy business on its face, but then the cable giants got creative. They extended their existing relationships with content owners and distributors, and they began bundling popular content offerings such as Netflix with their mobile plans.

Why did mobile services providers encourage such massive bandwidth consumption? Mobile executives understood that the typical mobile device spends from 60% to 80% of the time connected to a Wi-Fi network – networks they already control. In fact, binge watching on a mobile device consumes less bandwidth than binge watching on a smart 4K television. Best of all, they return to their position atop the media consumption food chain.

The rise of telecom service providers as content aggregators is a global phenomenon. In Europe, Vodaphone has struck deals with Amazon (Prime Video), Spotify, Google (YouTube Premium), and Discovery+.

By 2021 every major mobile services provider had streaming deals in place with major content providers.



In 2022 a subscription shakeout began as people emerged from pandemic cocoons. Viewing patterns changed and customers trimmed their video entertainment budgets. Partnerships with mobile carriers took on added importance to content owners, representing a stable and predictable revenue stream. Netflix and Disney experienced the least churn, but it was clear that the aggregators had won the upper hand. Content suppliers were seeking deals with content distributors that they had rejected just a few months prior, only to find those terms were no longer available.

Content providers cut production budgets as their yield per asset deteriorated once again. Parsimony was the new normal.

## What Aggregators Need from Media Tech Vendors

Content producers need flexible, efficient, and secure production tools must output UHD, 1080P, 720P and even 480P with closed captions, web captions, and subtitles. Reformatting – 16:9, 9:16, and 4:3 and encoding to ProRes, H.264, and H.265 must be automated. All audio, video, and sidecar files go through QC to meet the distributors technical specifications. A vendor that can deliver a seamless workflow from camera card to editing, audio mix, grading, and final encoding will win the loyalty of producers because a single missed deadline due to a delivery error might be the difference between turning a profit and absorbing a loss.

Cloud systems with a unified user experience easily spun up and scaled to work with ebb and flow of production swill come to be taken for granted.

Lastly, costs must be predictable. The speed and flexibility of cloud solutions are too often undermined by a client's inability to estimate the cost of these services. Budgets are and approved prior to the issuing of the, a gross underestimate of cloud costs jeopardizes the producer's business.

- 1 Variety May 13, 2012 - *Disney Plus Hits 103.6 Million Subscribers as Rapid Growth Slows, ESPN Plus Perks Up*
- 2 *MVNO Business Essentials*, Nereo Consulting



## Scenario 2: Content is King

Global content owners will win the future of media. Continuing to invest in the creation of premium content to air on their owned and operated direct-to-consumer services, while withholding content from the aggregators e.g. Netflix, Discovery, CBS all are “bypassing” the aggregators, building direct viewer engagements and increasing ARPU.

In this scenario aggregators with limited value e.g. Hulu may disappear.



### Summary

Content owners win the streaming wars and wield tremendous power over the streaming landscape. Because they own the content, they can drive viewership on their platforms and build communities around the content. The value in the media industry lies with the owners of the content. Even though content is king, owners often pay high bounties to sales agents or platforms, costs that cut deeply into profits. This is the backdrop that led large content owners to build their own platforms where they own the customer relationship and keep them within their walled gardens isolated from other toll keepers while consuming their content.

Smaller content providers have reluctantly joined the trend as they saw revenues squeezed by cable companies who were paying less for distribution rights or outright removing them from their offerings.

### The Rise of the Content Owners

From niche provider Crunchyroll to global behemoth Disney, content owners have built profitable streaming services with communities engage fans and create value on multiple points of the value chain. The content owner gains flexibility because outright ownership gives them right to the content in perpetuity, allowing for a longer-term amortization of marketing and promotion costs and yielding a greater ROI.

Crunchyroll launched a hybrid subscription (SVOD) and ad-supported (AVOD) model of licensing and subtitling back in early 2010. By 2021 they have reached over 120 million registered users in more than 200 countries and increased their SVOD subscriber base to over 5 million. They super-served their fans by offering options in how fans viewed their programming, with AVOD and SVOD. They engaged their fans with mobile games, merchandise, and manga expos. Their FCC recently approved the acquisition by Sony Pictures Entertainment to expand their distribution for their consumers.

Disney is a perfect example of a content owner that has built a community around its programming. The rise of OTT put the final nails in the coffin of the Home Video market that drove sales of Disney content after it had aired. They used a brilliant strategy of windowing their



home video releases for a limited time to increase scarcity and thus increasing demand. With the rise of OTT, as many content owners have done, Disney moved to a D2C model for their content. OTT has expanded the control of brand owners to understand their fan base by collecting valuable data, super-serving them with different options for viewing their content and engaging with their brands on different levels. (By utilizing this model, they have collected valuable understanding of their fans and the data to personalize the content presented to customers. This has given content owners a tremendous advantage in building the community around the fan and increasing engagement.)

For example, the content owner is now able to:

- Monetize directed advertising
- Increase access to user/fan data
- Drop the middleman e.g., licensing distributor.

Tier 2 content owners who have been dropped from MVPD providers and can no longer get the licensing fees they once did are moving to DTC models to reach their fans. Still, the costs are steep, and the technology and resources to operate these systems are significant. So many content owners are moving to hybrid viewing options for viewers. e.g., AVOD vs. SVOD.

We are seeing a shift in business models from licensing shows to creating them. Netflix, Hulu, and Amazon have all seen how valuable it is to own their content than to license it from a third party.

By the end of 2020, Netflix reported that they had over 2000 originals available on the platform, which makes up approximately 35% of their entire library. (For context, that is a jump of 15% from early 2019 when they reported having just over 1,000 original titles (20% of total title offering).

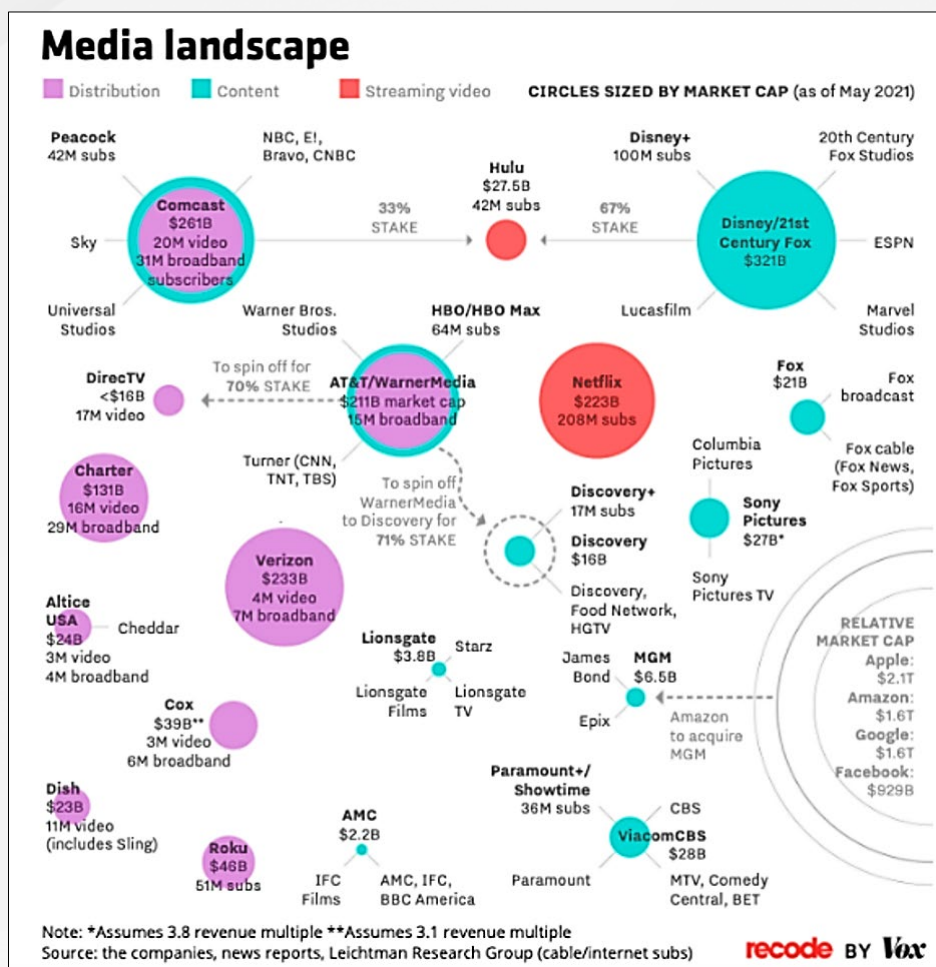
The launch of the Netflix store in June of 2021 was another indicator of the streaming giants seeing the value of expanding and controlling the communities formed around the content.

(In the past, companies like Crunchyroll created partnerships with competitors to air their programming across both platforms. Allowing consumers to be introduced to watch both programming on a single platform.)

Hulu, which started as an aggregator of syndicated programming and current-season reruns, began to copy Netflix and Amazon Prime's business models which launched *The Handmaids Tale* in 2017.

Amazon Prime gives the consumer multiple consumption options on its platform. Viewers can purchase channels ranging from Britbox to Anime Strike a la carte through the platform or watch the licensed and original programming that comes with Prime membership.

According to Variety, Disney+, Hulu and ESPN+ have a combined total of 137 million subscribers. The Disney+ bundle costs \$13.99/month. Crunchyroll's much narrower offerings are priced at \$9.99/month or \$100/year. The risk to content owners distributing their own content is that by keeping titles to themselves without to other platforms is that the audience with limited wallets



## What Content Owners Need from Media Tech Vendors

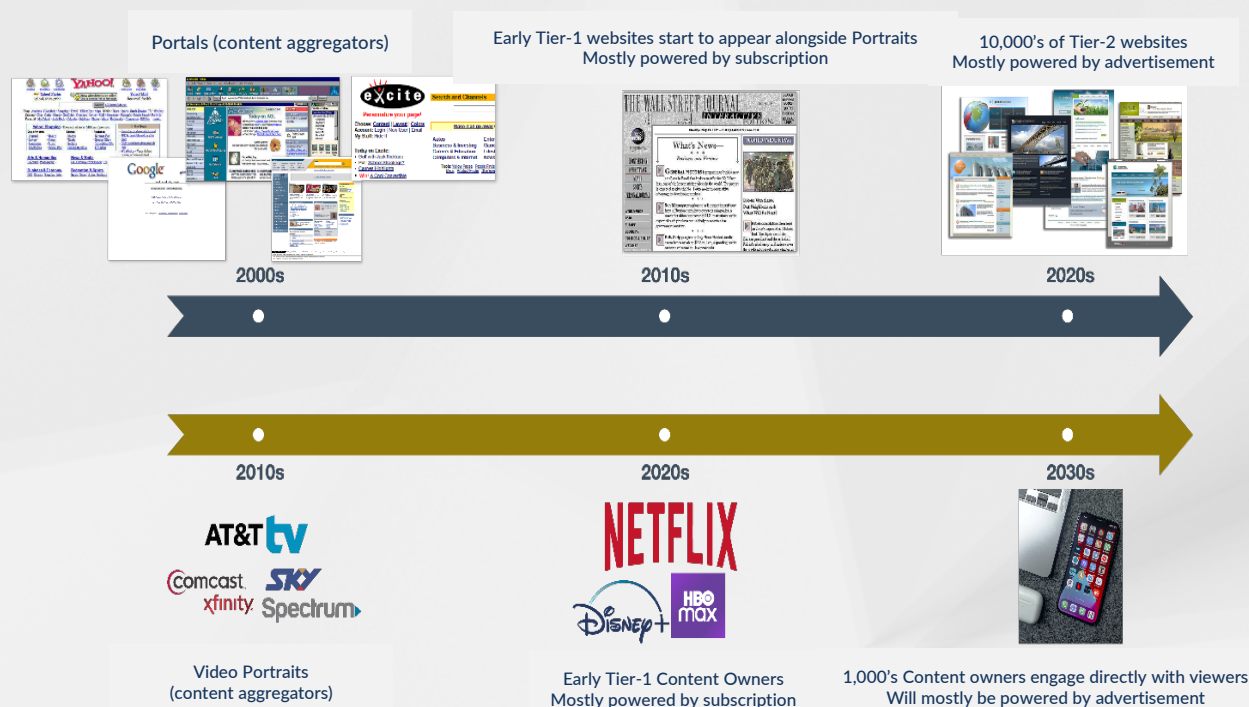
Content owners have built strong competencies in production and post production workflows. Unlike aggregators which control their distribution networks, content owners lack established relationships with CDNs. While Amazon CloudFront is a solid choice for most content owners, those new to the direct-to -consumer (DTC) space might need a little more hand holding and lower costs. Expect to see more content delivery providers adopt the Quortex model of bundling multiple services such as programmatic advertising integration and building cost management into their platform to ease the challenges of emerging D2C content players.

Security is important to all stakeholders, but a single breach can lead to an 8-digit loss and spook consumers. If a content owner struggles to protect their most valuable assets, what, customers will wonder is going to become of my private data?

Those media tech providers with platforms capable of ushering content through production and on to the customer's screen as a single managed service will prevail over the long term.

## Scenario 3: Video-Apps

Neither aggregators nor content owners are able to plant their flag atop the media hill. The industry remains fragmented with multiple parties maintaining D2C relationships.



## Summary

In this scenario, the tug of war between the mega aggregators and content owners continues indefinitely. The fully digitized television industry follows trajectory similar to the World Wide Web. The early days of the web are remembered for the struggles of Tier 1 content providers such as the New York Times and the Wall Street Journal to establish web presence outside of the main portals. The original portals may be gone, but their successors thrive. Just as 90s businesses sought coveted AOL Keywords, 21<sup>st</sup> century businesses value their Facebook pages and communities.

Just as internet users have access to countless websites of all sizes and specialties, future television viewers will have access to thousands of direct-to-consumer video apps, from Netflix and Discovery to the Outdoor Cooking Channel and the World Fishing Channel. Similar to



websites viewers will access a few Tier 1 providers. The web equivalent to Netflix in Tier 1 today is Facebook. Tier 2 media services such as Hulu and Apple TV's web parallels are The New York Times and 1000's or 10,000s of T3 video apps, most powered by advertisement (same as T3 websites).

## The Fragmented Media Marketplace

The 21<sup>st</sup> century television industry of the is evolving just as websites did in the 1990s. In the early days of the web, most content was accessed via website portals such as CompuServe and AOL. The first portals provided both network and content access. For example, AOL featured the New York Times in the news section of its portal.

A few years later, the growing number of connected PCs and a deeper understanding of the digital advertisement and subscription opportunities led several tier 1 content owners, such as the New York Times to launch their own websites, some monetized through subscriptions, many through advertising, and others utilized a hybrid approach. In 1996 the Wall Street Journal became the first news organization to erect a paywall. By 1999, in a letter to readers, publisher Per Kann boasted that the Journal's 265,000 paid subscribers made it the most successful newspaper on the web.

Fast-forward 30 years, and such numbers are relatively paltry. The WSJ is still the US subscriptions leader but now boasts 2.2 million subscribers. Every major newspaper in the United States has since placed their content behind paywalls. In fact, the appetite for portals and other forms of content aggregation has so diminished among online news sources that since the global news aggregator Google News launched in 2002, the newspaper industry has been to court seeking redress for alleged lost revenues nearly non-stop.

The TV industry is on the verge of a similar market disruption The vast proliferation of video content from the likes of Instagram, TikTok, and YouTube fuels the disruption, changing media consumption habits of younger generations. By analogy the television portals are legacy Multichannel Video Programming Distributors (MVPDs) like Comcast and Liberty Global. However, unlike AOL and earlier web portals, the MVPDs are evolving and expect to continue offering video content. MVPD offerings will focus on their original content such as Comcast-NBCU or LG-All3Media.

Like the evolution of the web, the growth of connected devices enables the tier-1 content owners and licensors to launch a Direct-To-Consumer (DTC) services. Disney and Netflix are the most popular such services in the US based on subscriptions. Due to lack of comprehensive technology solutions on the market, tier 1 DTC players have deployed high-cost homegrown solutions. Just as the portals lost subscribers due to the rise of tier 1 content websites, the availability of television DTC streaming services is accelerating the decline in MVPD pay TV subscriptions.

Due to declining pay-tv revenues many MVPDs are reducing TV investment by dropping niche channels and reducing the size of their VOD catalog. Such changes have a negative impact on hundreds of tier-2 content owners who in consequence need to supplement lost revenues having lost access to the MVPD customers. These tier 2 content owners now must launch their

own DTC video services in the form of apps for Roku, AppleTV, and the various smart TV platforms – an investment few anticipated four or five years ago.

## Media Tech Vendors Must Meet New Demands

Unlike the previous scenarios where large enterprises dominated the battlefield, this scenario features a much more heterogenous ecosystem where vendors of all sizes compete. The most glaring need in this scenario will be for end-to-end production tools that allow the tier 2 content creator to deliver quality product at a reasonable cost. Unlike large content owners and aggregators, these content producers cannot afford the large capital expenditures required for the development of their apps. Media tech must provide these vendors with pay-as-you-go options in the cloud. Few specialty cooking channels will have the appetite for facilities outlays, just as few DIY producers are interested in building their own data centers.

Beyond the machinery of production and distribution are the back-office activities of scheduling crews, licensing, programmatic advertising, and more. A scaled down tier 1 offering will not be enough to meet the needs of the growing tier 2 market. Tier 2 producers want to focus their energies on creative output and minimize time spent on technical configurations and administria.

A new cloud platform paradigm is needed to address the needs of tier 2. Flexible deployment models that scale with the producer's needs, require little training, and are easily administered will prevail. A scaled down tier 1 offering will not be enough in this market. Vendors will need to provide platform access to all participants in the tier 2 content value chain with robust APIs and a level playing field.

## Conclusion: Content Is King, But Data is Queen

No matter which scenario or combination of scenarios come to fruition, it is wise to step back and understand the motivations of each of the participants. No matter how the television landscape settles, content owners are going to sell content and aggregators will still have a place in the ecosystem. The aggregators' added value remains convenience and their ability to use their scale to negotiate better terms to pass on to customers.

So why so much effort to own the subscriber? What does the customer deliver beyond subscription revenue?

For those of us who remember the Cold War, we grew up with Western capitalist democracies led by the United States pitted against Communist dictatorships led by the Soviet Union. It was a contest for world domination. Two worldviews competed against each other on a global stage. Ultimately, the contest was won not on the physical battlefield, but in the battle of ideas. Capitalism triumphed by providing TVs, movies, fashion, music, technology, cars, and political freedoms to a now expanding middle class. This transpired because communism foundered on its inability to deliver improved lifestyles at any level. The winner was the system that provided the most to its citizens by way of upward mobility across all facets of one's life.

Today, combatants in the new cold war are fighting over the new currency of the modern age: data – our very own personal information. The battle is among corporate giants akin to the Greek gods (FANG, et al.) who believe that personal data is a good to be traded on the open

market and thus subject to market forces and nothing else. It is a battle as well between them and the individual. We the people, believe personal privacy must trump the market forces that lead to abuses. The most innovative, efficient, and possibly the companies who dance the line on the darker side of this foggy grey area are the ones who seem best poised to win. Data increases company value and market dominance.

It is evident, despite efforts such as GDPR in Europe, that giant corporations continue to trade in personal data for profit. Those practices expand largely unchecked. Despite individuals pushing back using government regulatory bodies to support the fight, the control of personal data has been ceded to the corporation. There is a third approach. It is the state controlled social credit system we see in China. These differing views about data protection cannot jostle for dominance indefinitely.

As trade grows increasingly global, content aggregators, distributors, creators whether a FANG, a Telco, Cable Company, Independent Network, Studio, Television Network, etc. it's all becoming clear that personal data crosses borders far too easily and that the currency of customer's personal data has become the queen on the chessboard. Content has simply become a carrot to attract consumption behavior. Think of content as that shiny car sitting on top of the slot machines at a multibillion-dollar Las Vegas casino trying to attract one to indiscriminately insert cash to play their game!

In 1980, two decades prior to Facebook, [\*The Third Wave\*](#) by Alvin Toffler wrote of an economic movement that was the convergence of the means of production and consumption. Consumption also requires concurrent production. He coined the term Prosumer: a person who is "part of a new 'Wikinomic' model where businesses put consumers to work" (Ritzer & Jurgenson, 2010, p.17).

In the digital economy, presumption occurs when media platforms put consumers to work by utilizing content as the magnet. Platforms not only produce, aggregate, and distribute content, users freely and simultaneously produce their own content in the form of data in how they consume, engage, and respond to that content by way of sharing via technological features and via word of mouth (online sentiment).

Just look at the Terms of Service for these companies, a fundamental threat to a user's privacy lies not in the *ownership* of content, but in the *processing* of content. Although these platforms do not own the data users upload to their servers, they can make money through the licensing and processing of the data. The sale of content licenses from these platforms to third parties can result in financial gain for these platforms. Additionally, these platforms benefit from data is through the processing of user data to create profiling data to create advertising and market research products in which they can sell to third party firms. This profiling data is created by the media platforms themselves to increase the accuracy of their profile data about specific demographics, including your likes, dislikes, habits, wants, and expectations. This model is mutually exclusive to the social networks as any digital bread crumb a prosumer leaves behind has value whether it is media network, social network, ecommerce platform, service provider and so on.



### Sample from Amazon's privacy policy.

*We automatically collect and store certain types of information about your use of Amazon Services, including information about your interaction with content and services available through Amazon Services. Like many websites, we use "cookies" and other unique identifiers, and we obtain certain types of information when your web browser or device accesses Amazon Services and other content served by or on behalf of Amazon on other websites.*

### Sample from Google's Privacy Policy

*We collect information to provide better services to all our users — from figuring out basic stuff like which language you speak, to more complex things like which ads you'll find most useful, the people who matter most to you online, or which YouTube videos you might like. The information Google collects, and how that information is used, depends on how you use our services and how you manage your privacy controls. We also collect the content you create, upload, or receive from others when using our services. This includes things like email you write and receive, photos and videos you save, docs and spreadsheets you create, and comments you make on YouTube videos.*

### Sample from Comcast's Privacy Policy

*To provide you with our Services, we collect your personal information. This can include information that does not personally identify you — such as device numbers, IP addresses, and account numbers. It may also include information that does personally identify you, such as your name, address, and telephone number. We call any information that identifies you "personally identifiable information" or "PII."*

*If you allow others to use your Comcast or Xfinity accounts or Services, we will also collect personal information about those individuals. If you use our Services through someone else's account, we will collect information about you, but it may not identify who you are to us. We may also collect information about you from third parties.*

The winner of this new cold war will be the one who attracts more users, increase engagement and garner as much data as possible on each person content viewer. Ultimately, all users have a choice to not participate in this information exchange by electing to not engage with platforms that commodify user generated data. However, this means turning off and tuning out of all media and digital engagement. It's unlikely enough consumers will opt out to make a meaningful impact.

Therefore, the contest is between the corporate giants who peddle content that enables data collection. The winners will be the corporations who use their Data Queen across the entire chess board and leverage the most engaging content and manifest superior data collection methodologies.