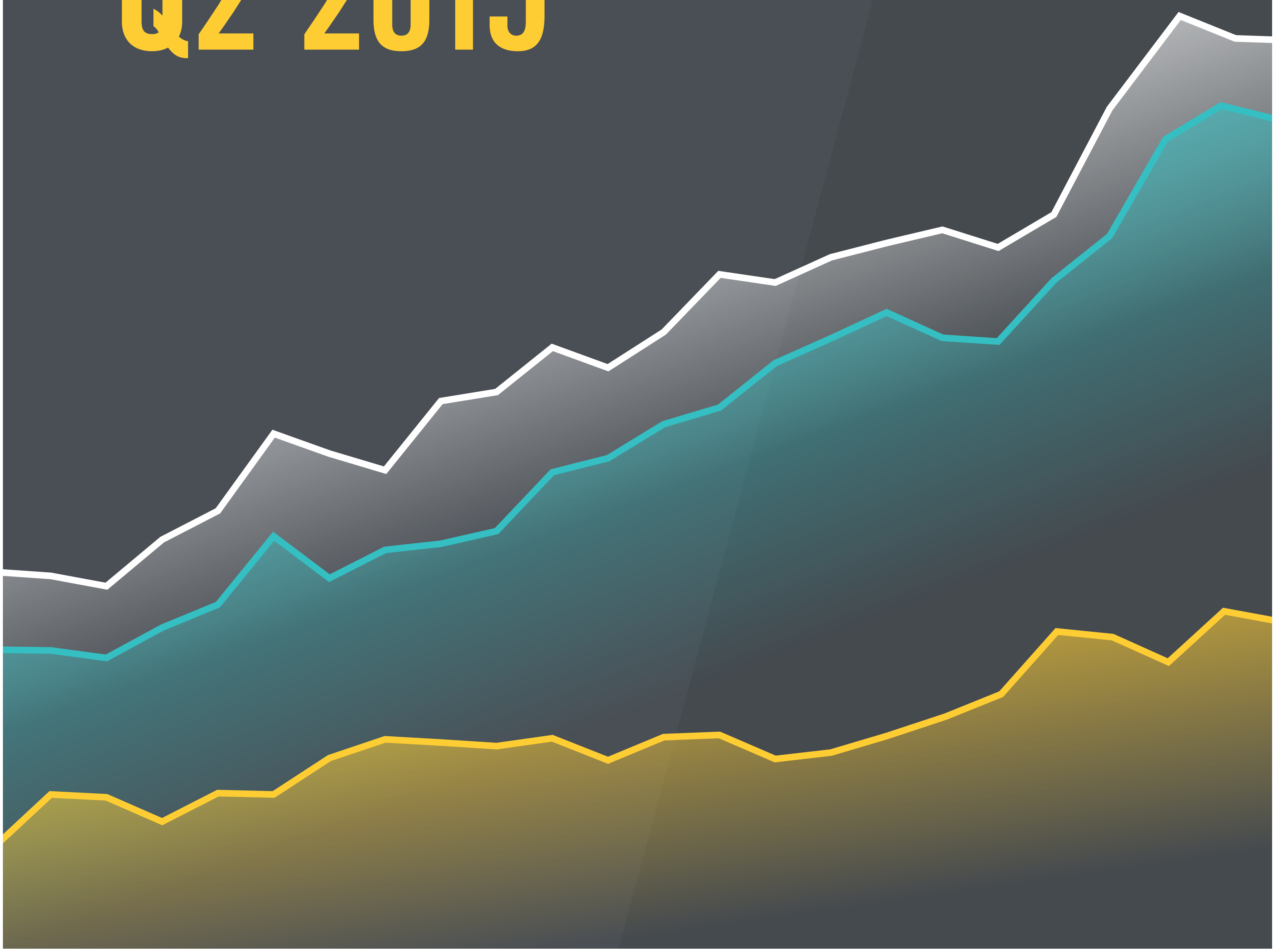
OOYALA®

GLOBAL VIDEO INDEX

Q2 2015



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INTRODUCTION

> "Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning."
>
> **WINSTON CHURCHILL**

Sure, things looked dismal for pay TV operators during the second quarter of 2015. In the U.S., at least, subscriber loss among the top providers hit a record peak. But it's important to take a deep breath and note that while the world is changing, there's time to get these changes right, and ample data to help light the path.

Looking back over the past couple of years, it's safe to finally say that no one is on the sidelines anymore, waiting to see which way the wind will blow. Perhaps it's the end of the beginning. Perhaps we can agree we're no longer just getting started, but banding together as an industry to move the TV experience into the more mobile, more personalized future.

Ooyala's quarterly Global Video Index, informed by consumption data from hundreds of millions of viewers, and supported with metrics from Ooyala's ad tech platforms and a wealth of insight gleaned from scouring reams of industry research, sheds some light on the new shape the TV landscape is taking.

Now we bid the "beginning" a fond farewell.

EXECUTIVE SUMMARY

Highlights from Ooyala's latest report include:

TABLET AND SMARTPHONE VIDEO TRENDS

Younger consumers continue to drive the adoption of mobile video, seeing it as the core of their video entertainment universe.

And the trend is a global one. Nearly half of all video plays in the second quarter were on mobile devices. Smartphones continue to be the device of choice, with nearly 8X as many plays on smartphones as on tablets.

The second quarter saw mobile video plays exceed 44%, up 74% from a year ago and up a whopping 844% since Q2 2012. By the end of 2015, we expect mobile to account for more than 50% of all video plays.

ENGAGEMENT PATTERNS BY DEVICE

Consumers apparently have decided that any screen is suitable for watching any content, something that has become increasingly clear across the past few quarters.

Mobile phones (32%) remain a popular screen for watching short-form video in lengths of 1–3 minutes, although PCs (32%) appeared to be equally as popular.

LONG-FORM VIDEO CONSUMPTION

When it comes to longer-form content of over 10 minutes in length, views by device were more even. Tablets (57%) and connected TVs (53%) saw a slightly higher percentage of views, followed by desktop (40%) and mobile phones (33%).

For content over 30 minutes in length, connected TVs (52%) were the top choice, followed by tablets (36%), mobile phones (23%) and PCs (22%).

PROGRAMMATIC TRADING UPDATE

Data continues to demonstrate increased confidence in programmatic trading among premium video publishers and broadcasters.

Across a set of more than 40 European companies using Ooyala Pulse SSP, Ooyala's programmatic trading platform, we saw significant increases in programmatic-driven revenue throughout the quarter, along with higher eCPMs and more deal ID-based transactions, which allow for one-to-one deals in a programmatic environment.

EXECUTIVE SUMMARY

VIDEO ADVERTISING TRENDS

As in the general TV ecosystem, mobile — both smartphones and tablets — has moved from understudy to star. Nowhere is its ascendancy more apparent than in the realm of video advertising.

In Europe and Asia, **mobile ad impressions** increased for both publishers and broadcasters at the expense of PCs. Broadcasters saw mobile ad impressions rise at the expense of PCs.

The increase in publisher ad impressions on mobile devices dwarfed the gains of broadcasters, taking nearly 50% of views, up more than 11%.

Fill rates grew across the board for PCs, mobile devices and IPTV, a rebound from the seasonal lull that generally follows the holidays.

Broadcasters streaming long-form premium content continued to see **ad completion rates** at and above 90%, depending on the screen. Tablets delivered rates exceeding 92% and PCs remained above 90%.

Ad completion rates for publishers also saw increases in the quarter. Tablets delivered the highest ad completion rates, followed by PCs and mobile.

POINT OF VIEW

Jim O'Neill, Principal Analyst and Videomind Editor

The sky isn't really falling for service providers, despite what the many Chicken Littles and Henny Pennys of the post-TV era would have you believe.

But skies did get a little gloomier in the second quarter as North American pay-TV subscriber erosion turned from a trickle into a torrent. Providers in the U.S. and Canada experienced their *worst quarter ever* for customer defections, losing nearly a half million subscribers.

The second quarter has always been a challenging one for operators in North America; it's a time when families move to new homes, college students start summer break and everyone moves outdoors, a deadly troika that fuels seasonal service disconnections. But this quarter, analysts pointed to an increase in the number and quality of over-the-top video offerings that added more fuel to that fire. That's not a trend that will stop anytime soon.

But, Chicken Little be damned, there also was a considerable ray of sunshine in the quarter's results.

It came in the form of broadband gains, where the top telcos and cablecos added about 360,000 new subscribers. Those additions are helping to grow a new business for service providers, one with a significantly higher margin than pay-TV video. It carries with it an additional silver lining in the form of OTT.

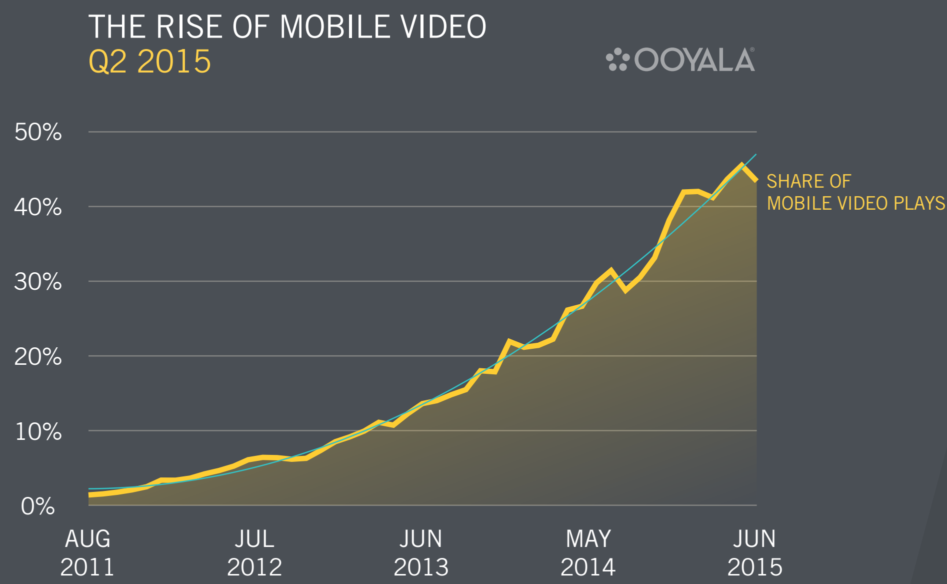
For years, industry conferences routinely included at least one panel or presentation titled, "OTT Video: Friend or Foe?" The first half of this year has shown a gradual thawing in the cold shoulder operators have maintained toward OTT products.

Several Tier 2 players last year began offering subscribers a dedicated Netflix app. In May, five more said they'd offer Hulu's SVOD service directly to consumers, too.

Tier 1 players Cablevision and AT&T's U-verse also made plans to offer Hulu, and Canadian IPTV provider Telus jumped on the Netflix fanwagon, even though it already offers Bell Media's SVOD service CraveTV.

Perhaps a more intriguing development, showing that OTT and operators are slowly becoming BFFs, was the most recent retransmission deal between Cablevision and CBS. First the two sides hammered out an agreement for CBS, CBS News and Showtime. Then they also made plans to launch a pair of OTT plays, CBS All Access and Showtime International, to Cablevision's Internet customers, a nod to the growing allure of OTT for consumers and service providers.

TABLET AND SMARTPHONE VIDEO TRENDS



Since Q2 2012, mobile video plays have grown at a compound annual growth rate (CAGR) of more than 111%, with the share of video plays on mobile devices increasing to 44% in Q2 2015 from less than 5% over the same period. That's a whopping 844% rise.

In Q2 2015, the percentage of video views on mobile devices continued the trend, albeit at a more reasonable pace. Year-over-year mobile video plays increased 74%. But quarter-over-quarter (Q/Q) growth was 6%, the most modest quarterly increase since the 5% increase seen in Q4 2012.

Call it, perhaps, an offshoot of the law of large numbers. As mobile views — and the number of video views overall — continue to grow, double-digit increases are less likely.

But mobile continues to show tremendous traction among Millennials and younger consumers.

U.K. telecom regulator Ofcom, for example, recently reported that 45% of consumers aged 16–24 were more likely to use their smartphone to watch video than a set-top box, and said under-45-year-old consumers were driving a significant decline in traditional TV viewing of between 8% and 12%.

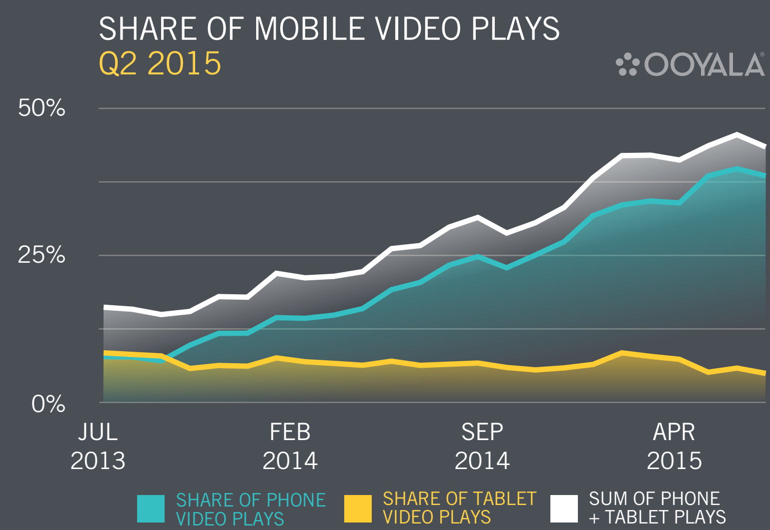
ZenithOptimedia, meanwhile, forecasts a 23% global increase in the amount of time people will spend consuming online video daily in 2015, and an additional increase of nearly 20% in 2016. The biggest driver? The rapid rise of smartphone and tablet penetration across the globe.

It expects mobile video viewing to grow by 44% in 2015 and 35% in 2016, with video consumption on non-mobile devices increasing nearly 10% in 2015 and 7% in 2016. The company said mobile devices accounted for 23% of time spent watching online video worldwide in 2012 and 40% in 2014, and forecast it to reach 53% in 2016. That increase has been accompanied by a decline in linear viewing in France and Russia since 2013, in the U.K. and the U.S. since 2014, and declines are expected in China this year.

Other regions also expect huge growth in mobile adoption and subsequent increases in the growth of mobile video consumption.

Researcher GfK pegged Latin America as the fastest-growing smartphone market in the world, adding users even faster than China or North America.

TABLET AND SMARTPHONE VIDEO TRENDS



"It is the same trend that has driven growth at different times in all regions," said Kevin Walsh, director of trends and forecasting at GfK.

In Latin America, smartphone penetration has grown from just 7.6% of all mobile users in 2011 to nearly 30% this year. By 2018, that number is expected to grow to 43%.

Ooyala remains very bullish on the growth of mobile, and we expect to see mobile video plays exceed 50% of all video plays by the end of this year, if not sooner.

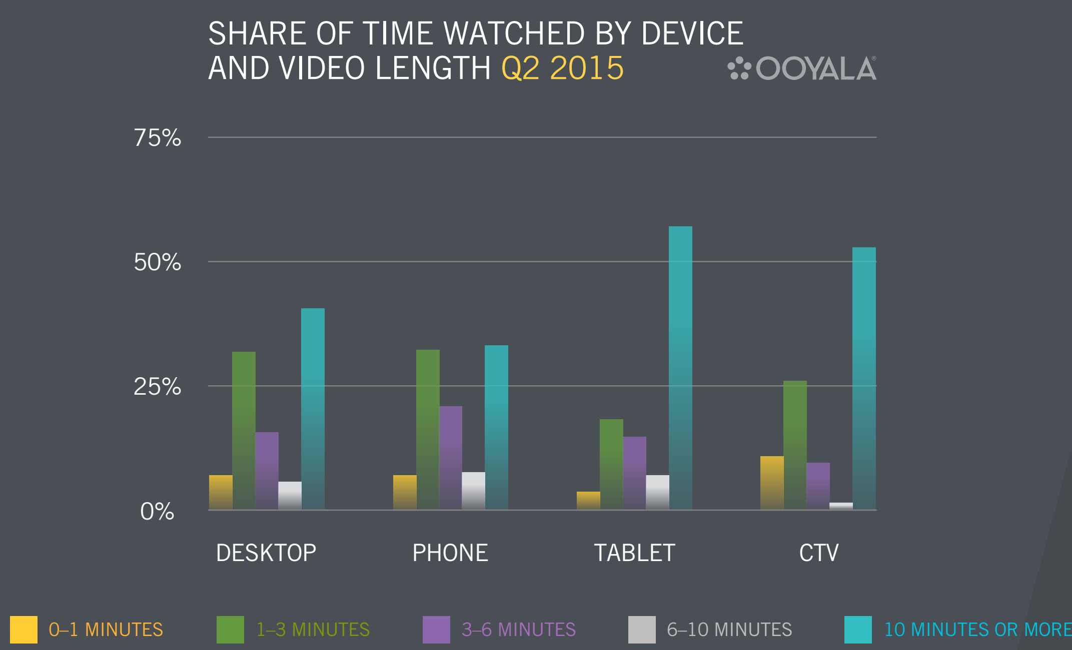
THE BOTTOM LINE

The mobile video revolution continues, with an audience that is ready — and eager — to carry its banner. Smartphones with bigger screens are replacing smaller-screened mobile phones, and even tablet sales have seen an uptick, with nearly 200 million mobile data plans expected to be associated with them in the coming years.

A swath of U.S. operators are floating aggressive mobile video options, including Dish Network, Verizon, Comcast, Apple and, inevitably, AT&T and its new business DirecTV. Content owners and broadcasters have begun to see mobile as more than a platform for snacking with short-form video. Studies show that more viewers are turning to mobile for all of their video entertainment, from news to episodic TV and even long-form premium content like movies.

We've said it before, but it's worth repeating: Delivery of mobile video isn't a tactical component, it's a strategic one that requires the ability to engage consumers with a consistent TV-like experience, including the ability to monitor quality of service, to provide search and recommendation that helps engage audiences and to use diverse monetization tactics, all supported by an umbrella of actionable insights based on data.

ENGAGEMENT PATTERNS BY DEVICE AND LONG FORM VIDEO



ENGAGEMENT PATTERNS BY DEVICE

Screen-size relevance for watching online video? Fuggedaboudit.

Consumers are firmly embracing the concept that video can be viewed on any screen, regardless of genre.

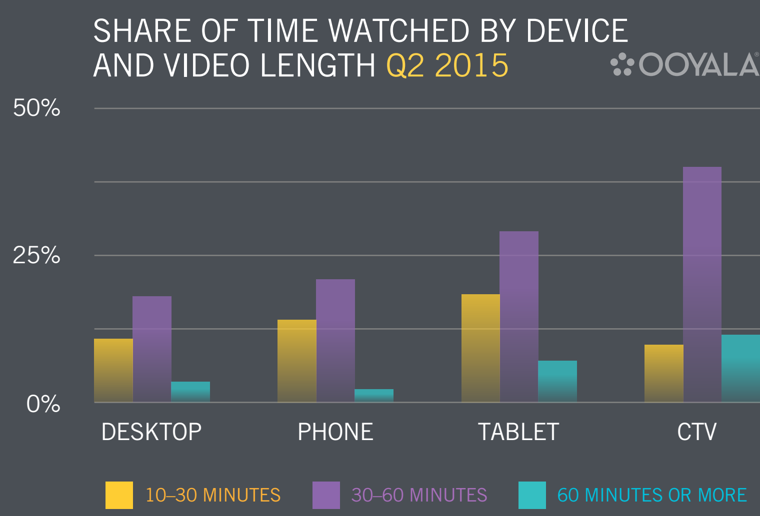
Ooyala's data shows that tablets (57%) and connected TVs (53%) were used nearly equally in terms of share of time when video length exceeds 10 minutes. Desktops followed at 40%, with mobile phones coming in at 33%.

The figures have been fairly equivalent over the past few quarters as tablets and mobile devices assured themselves a place at the video table and desktops saw some gradual decline.

Mobile phones maintain their dominance as the devices more suited to snacking on content, with users spending 67% of their time with content less than 10 minutes long. That's a slight bump up from 63% in the previous quarter. Nearly one-third (32%) of time watched in the quarter was with content one- to three-minutes long, the same as the share for desktops.

Desktop devices also saw a sizable piece of the share of time watched with video less than 10 minutes long, about 60% in the second quarter, down from 65% in Q1.

ENGAGEMENT PATTERNS BY DEVICE AND LONG FORM VIDEO



When it comes to video content 30 minutes or longer, a larger screen generally showed a greater share of time watched. Connected TVs (52%) were ahead of tablets (36%), mobile phones (23%) and PCs (22%). But it's crucial to note that all devices had a share of the pie, especially as younger users increasingly impact the numbers.

A study from IAB found that nearly one-third (30%) of smartphone owners in the United States and Canada watch full-length TV shows on their smartphones, and 20% watch full-length movies.

The appetite for long-form video is nearly as voracious in other regions as well, with Europe, Latin America, East Asia and Australia/New Zealand all reporting that between 22% and 23% of smartphone video viewers say they watch TV shows on their phones.

THE BOTTOM LINE

You needn't be a rocket scientist to know that the best screen for enjoying live ice hockey action is the biggest one that you can find. But consumers are opting for smaller, where-I'm-at screens for a growing slice of their video entertainment.

The rationale that TV is best enjoyed at a designated time with family or friends is outdated. A recent study of 2–12 year olds found that 57% of them preferred watching video on a mobile device because they could take it anywhere; it gave them a sense of independence and they could easily navigate to the content they wanted.

"The tablet is magic to them," said one mother involved in the Miner Co. research. That's the (near) future. Publishers, broadcasters and content owners should be aware that delivering a quality experience to every screen is no longer a goal, but has become table stakes.

VIDEO ADVERTISING TRENDS

Deal ID transactions

176%

monthly growth

eCPMs

25%

in Q2 2015

Revenue

119%

from programmatic advertising

Programmatic advertising data collected during Q2 2015, from 40 companies using Ooyala Pulse SSP

Programmatic Trading Update

This quarter we looked at a set of more than 40 broadcasters and publishers across Europe who use Ooyala Pulse SSP, our programmatic trading solution. From the beginning of March 2015 through June 2015, these companies saw, on average, an increase in effective cost per thousand impressions (eCPMs) of more than 25%. And during this time, their collective programmatic advertising revenue grew 119%.

The growth is notable as European premium content providers shift their programmatic trading strategies from open to private marketplaces or to programmatic direct transactions delivering greater yield for premium video inventory.

This strong growth demonstrates that large brands and advertisers are more comfortable purchasing premium video inventory in private programmatic settings. The Q1 2015 RTB Report from AdForm shows that private marketplaces accounted for nearly 25% of all European advertising in Q1 2015, with that number expected to grow significantly in the coming months. The trend extends beyond Europe; eMarketer expects programmatic direct deals to reach $8.57 billion in the U.S., representing 42% of all programmatic ad spend by 2016.

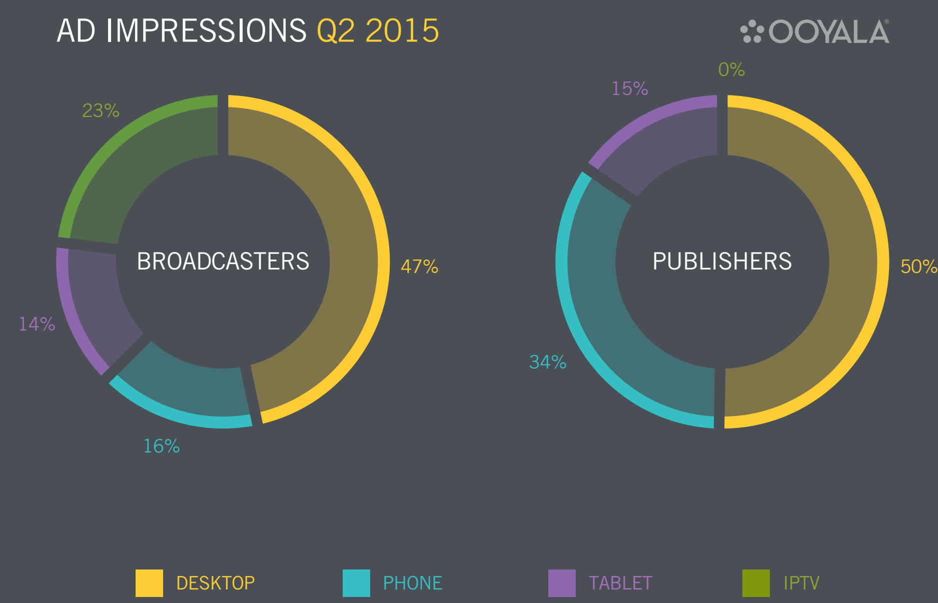
Another example of this increased confidence is the trending uptick in deal ID-based transactions, which allow for one-to-one deals in a programmatic environment. These transactions grew at a monthly rate of 79% in Q1 2015, and in Q2 deal IDs grew more than two times that rate, at 176%. Also in June 2015, eCPMs from programmatic direct deals were more than double those traded via marketplaces. Not only are premium content providers seeing greater value in quality by going direct with programmatic trading, but they are increasing their revenue significantly.

There is ample evidence supporting these trends throughout the industry. In its Programmatic Revenue Report, the IAB said that while the majority of programmatic inventory was bought and sold through open auctions, it expects a shift to private auctions, unreserved fixed-rate or automated guarantee types of trades in the next few years.

"We foresee a shift to other types as advertisers and premium publishers see a strategic shift to buy and sell inventory within the other types," the report said.

And Magna Global, part of the IPG Mediabrands Network, forecasts that $10 billion in TV ad budgets will run through programmatic platforms by 2019. It also expects a surge in the average value of programmatic buys across platforms. Programmatic is expected to represent about $2.5 billion of U.S. TV budgets in 2015.

VIDEO ADVERTISING TRENDS



Key Video Advertising Trends

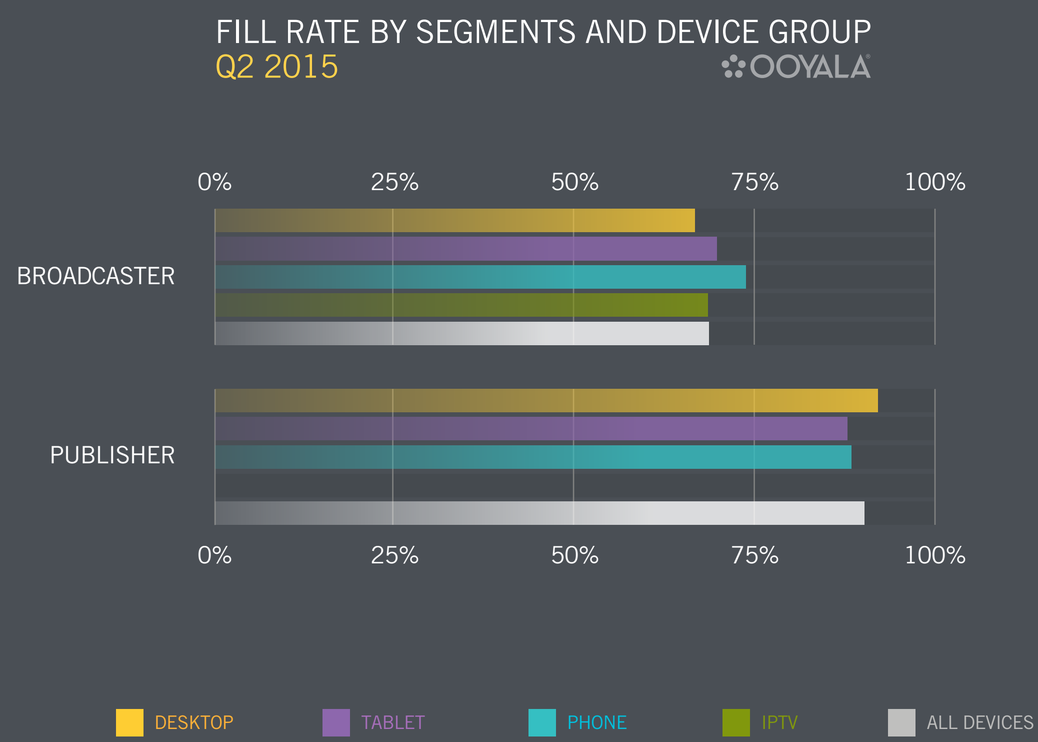
AD IMPRESSIONS

Q2 showed a gradual shift of ad impressions toward mobile devices. Broadcasters saw ad impressions on mobile devices grow slightly to 30% from 28% a year ago. IPTV also grew to 23% from 18%. Both sectors benefited from a reduction in the amount of ad impressions on PCs, which had a share of 47% in the quarter, down from 54% in Q1.

For publishers, the growth was even starker. Mobile phones (34%) and tablets (15%) combined for nearly one half (49%) of ad impressions, up from just more than one third (38%) in the first quarter. Publishers saw PC impressions drop to 50% from 62% in the previous quarter.

Both shifts are likely to accelerate as the ad space, like the traditional TV space itself, evolves to serve a younger audience that is, by far, more mobile and more comfortable with both tablets and smartphones.

VIDEO ADVERTISING TRENDS



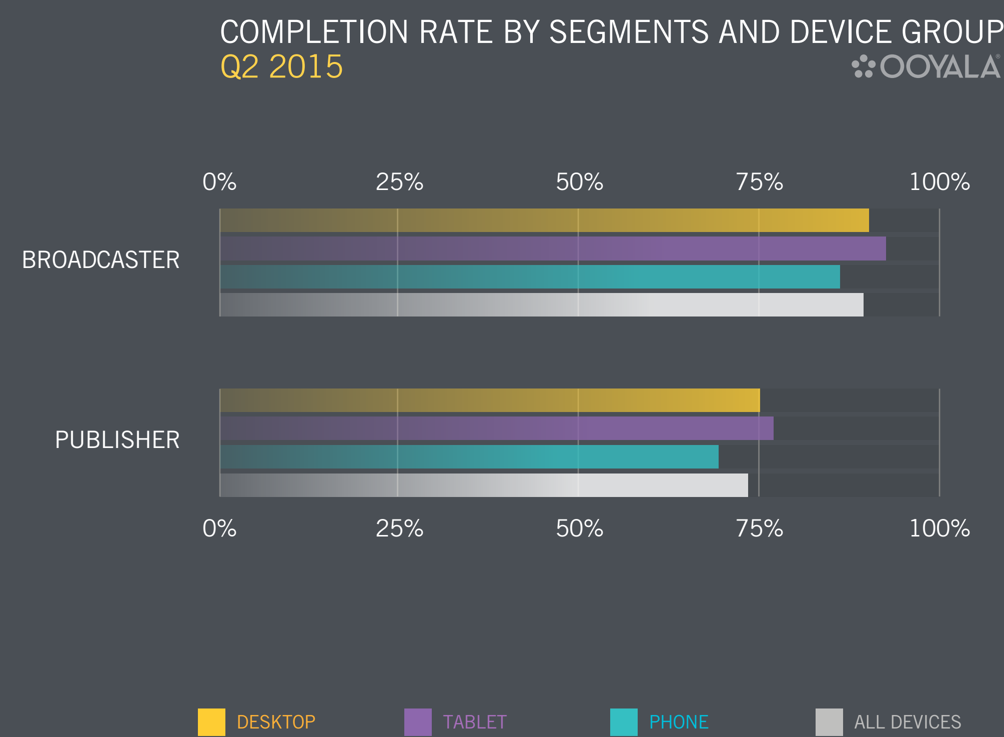
FILL RATES

Fill rates grew across the board in the second quarter, rebounding from the seasonal lull that often affects the first quarter.

PCs had the highest fill rate for publishers, 92%, up from 77% in Q1. Broadcasters, meanwhile, saw fill PC rates increase to 67% from 64%.

Broadcasters also saw fill rate climb on mobile devices, with a fill rate of 74% for mobile phones and 70% for tablets in the quarter, up from 54% and 57% in the previous quarter. Publishers saw rates of 89% and 88%, up from just 55% for mobile phones and 56% for tablets.

VIDEO ADVERTISING TRENDS



AD COMPLETION RATES

Ad completion rates continued to be strong for broadcasters, who generally stream premium, long-form content. Ad completion rates on tablets topped 92%, the highest compared to all other devices for publishers or broadcasters, and an improvement from Q1's 89%. PCs also saw completion rates top 90%, slightly higher than in the previous quarter. Mobile, meanwhile, delivered a completion rate of more than 86% for broadcasters in the quarter, up from 79% in the previous quarter.

Publishers can face a challenge with ad completion rates since much of the content they stream is more often short form that is far more snackable. Consumers often will "graze" short-form content, and that can lead to ad completion rates that are lower than for broadcasters.

Nevertheless, publishers in Q2 generally saw gains in ad completion rates.

Tablets, again, were top performers, delivering an ad completion rate of 77%, up a whopping 10% from the first quarter. PCs came in at 75%, compared to 73% in the previous quarter, and mobile delivered an ad completion rate of 69%, in line with Q1's 71%.

THE BOTTOM LINE

Nearly 9 in 10 media planners in a recent survey said they expect mobile's share of online advertising to increase as traditional TV and pay-TV advertising becomes less effective at reaching consumers.

That's creating a massive opportunity for broadcasters and publishers who can leverage their content by delivering it to a universe of mobile devices. Being able to do so, using data to help target specific content to the audience segments brands want to reach, will enable publishers and broadcasters to demand — and get — higher CPMs.

ABOUT OOYALA AND THE GLOBAL VIDEO INDEX

This report reflects the anonymized online video metrics of the vast majority of Ooyala's 500+ customers, whose collective audience of hundreds of millions of viewers spans nearly every country in the world. Ooyala's ad serving platform managed over 1.2 billion ad impressions in May 2015.

This report does not document the online video consumption patterns of the Internet as a whole. But the size of the Ooyala video and advertising footprint, along with the variety of our customers, means this report offers a representative view of the overall state of online video.

ESPN, Univision, Sky Sports, Foxtel, NBCUniversal, RTL (Germany), M6 (France), TV4 (Sweden), Mediaset (Spain), STV (UK) and Singapore's Mediacorp: these are just a few of the hundreds of broadcasters and media companies who choose Ooyala.

Ooyala is a subsidiary of Telstra, the largest telecommunications company in Australia, providing fixed and mobile services to millions of consumers, as well as advanced network applications and services to enterprise clients in Australia and overseas.

Headquartered in Silicon Valley, Ooyala has offices in New York, London, Stockholm, Sydney, Tokyo, Singapore, Cologne and Guadalajara, and sales operations in dozens of other countries across the globe. For more information, visit www.ooyala.com.