



Tuned into  
the Phone:  
Mobile Video Use in  
the U.S. and Abroad  
January 2009

## Introduction

As most readers are keenly aware, the consumption of video content has evolved considerably over the past decade, changing the dynamics not just of the in-home television viewing experience but extending professionally produced video content to other screens, portable and stationary. For that very reason, Nielsen launched the Anytime Anywhere Media Measurement (A2M2) initiative in 2006 to ensure a coinciding evolution of measurement that would allow us to provide continued insights on the multi-screen video experience. Today, through A2M2 efforts as well as the integration of Nielsen's telecom practice, born out of Nielsen's acquisition of Telephia Inc. in 2007, Nielsen is able to provide a great deal of insight on the consumption of mobile video on portable devices, particularly the mobile phone.

In this paper, we provide an overview of the U.S. mobile video market as consumed over mobile phones, as well as corresponding mobile video usage rates around the world. We outline who uses mobile video, how they use it and what they want from the medium going forward. We also consider the keys to mobile video's future growth: mobile DTV, ad-subsidized subscription models and the expanded availability of mobile Web video.

### Key findings include:

- In the U.S. today, 10.3 million mobile phone subscribers access video content on their phone each month, though adoption of mobile video still lags compared to other mobile media
- Of the 12 mobile video markets tracked by Nielsen, penetration of mobile video consumption is highest in the U.S. at 5 percent, followed by Canada, France and Italy, where 4 percent of mobile subscribers access mobile video each month
- The most popular means of mobile video consumption is mobile Web video: 66 percent of mobile video users say they consume their mobile video through mobile Web
- The profile of mobile video users is broad enough to not merely classify this medium as a young, affluent man's medium. Though the audience skews young, we find an audience for mobile video content across the demographic spectrum.
- Apple's iPhone is the most popular phone for mobile video consumers—as of Q3 2008, already 11 percent of all streaming video users were using an Apple iPhone
- Comedy makes the most popular mobile video content: 40 percent of mobile video viewers in Q3 2008 said they had watched comedy content, at an average of 10 minutes per session
- As of Q3 2008, NBC is the most watched mobile video brand in the U.S., and 4.7 million mobile video users watched NBC-branded mobile video entertainment in the typical month in the third quarter—46 percent of the overall mobile video audience
- 71 percent of mobile video viewers said they were satisfied with the mobile video experience
- Growth of the mobile video audience could come from mobile Web-based video options, mobile DTV or an improved model of ad-subsidization around subscription mobile video

The data are derived primarily from our Q3 2008 Mobile Video Report, a survey of 2,672 active users of mobile video surveyed online in September 2008. These users are identified through Nielsen's larger sample of 90,000 mobile users each quarter, for whom we track not just mobile video consumption but other aspects of the mobile experience. In addition to survey-derived data from our Mobile Video Report, this paper includes data from several other Nielsen sources, including Nielsen's Bill Panel, a direct-measurement panel of more than 50,000 U.S. mobile subscribers who allow Nielsen to monitor wireless billing activity. International insights are derived from our research of mobile use among 85,000 international subscribers in Q3 2008. Insights on interest in over-the-air Mobile DTV come from Nielsen-CBS primary research facilities at TV City in Las Vegas, NV.

Before diving into the use of mobile video today, though, let us pause to realize that mobile video, on the whole, is not a new phenomenon.



## An Old Idea, Renewed

In May 1963, ten years before the first cell phone call would ever be made, word broke that RCA was developing a pocket TV. Further details were kept confidential.

Three years later, in February 1966, Popular Mechanics reported on the forthcoming availability of a portable television to be launched under a "famous maker's label" by year's end, thanks to the development of a flat picture tube. Later that year, Motorola—a name not distant from the world of mobile video today—demonstrated to the world a remarkably small portable TV designed by their engineer De Loss Tanner. Tanner's invention was claimed as the smallest TV in the world. Boasting just a 1 and 1/8 inch picture tube, Motorola's tiny TV weighed just 12 ounces and used its earphone lead as an antenna. *The Columbus Dispatch*, profiling the invention, called it a view to the future—opining that tiny TVs could one day replace the transistor radio. Tanner, due to present the invention at a meeting of the Institute of Electrical Engineers, died six days before the conference.

It wasn't until Sony's launch of the "Watchman" (FD-210) in 1982, then, that a portable TV was introduced to the mass market: first in Japan and then, two years later, in Europe and North America. Still, forty-two years and several generations of portable televisions after Motorola's Tiny TV, portable television has hardly become mainstream. That could soon change, though.

In the U.S. today, 10.3 million mobile phone subscribers access video content on their phone each month. Through mobile websites, subscriptions to clips delivered by the carrier or through "live" broadcasted TV programming, millions of U.S. subscribers today consume video news and entertainment in the way De Loss Tanner and other engineers envisioned nearly half a century ago.

That said, the market for mobile video subscriptions in the U.S. has grown just marginally over the past year, growing from 6.4 percent of all subscribers in Q3 2007 to 7.3 percent of all subscribers in Q3 2008. The growth we do see in mobile video subscriptions can be largely attributed to the expanded use of all-inclusive service packages such as Sprint's "Simply Everything" plan.

Why isn't mobile video use more pervasive? Lack of awareness, lack of differentiating capabilities, high cost and lack of compelling content are inhibiting the further adoption of mobile video in the U.S. Today, we find ourselves at mobile video's plateau—a point where, all things remaining the same, we would expect the adoption of mobile video to slow considerably.

Three key developments in mobile video, however, could still fuel further growth in the market and expand not just the universe of mobile video users, but also the universe of those subscribers interested in accessing such services. The expanded use of mobile Web and mobile Web video, the rollout of mobile digital television (mobile DTV) and an improved advertising subsidy to subscription-based streaming mobile video services could each help to grow the mobile video opportunity to the mutual benefit of carriers, device manufacturers, content providers, advertisers and consumers.



The expanded use of mobile Web and mobile Web video, the rollout of mobile DTV and an improved advertising subsidy to subscription-based streaming mobile video services could each help to grow the mobile video opportunity

## It's Not the Watchman

There are two primary reasons why mobile video (henceforth referring to video consumed over mobile phones) is more likely to succeed than handheld TV (henceforth referring to portable, analog television from the 1980s): embedded access points and expanded consumer demand for shifted media consumption.

Mobile video can work today because 224 million mobile subscribers already carry devices in their pockets that, if not presently capable of mobile video consumption, will be the next time they upgrade their device. Already, 109 million mobile subscribers carry devices capable of viewing some form of video content—they just need to turn it on.

The other reason mobile video could succeed today in a way that handheld TVs did not is an expanded content universe and engagement with content. In 1984, the year the Watchman was launched in North America, the typical American family had about 20 channels of content on their television, no access to online video and the concept of user-generated video was limited to home VHS of their daughter's birthday party (estimated reach: 5 persons). Today, the typical American family has about 120 channels available to them on their television. Add to that an array of online video offerings: 14,400 hours (600 days) worth of new content is uploaded to YouTube every day, according to the service. This explosion of delivery channels and both professionally and user-generated content has done more than diversify the choices available to American video consumers—it has increased their propensity for consumption.

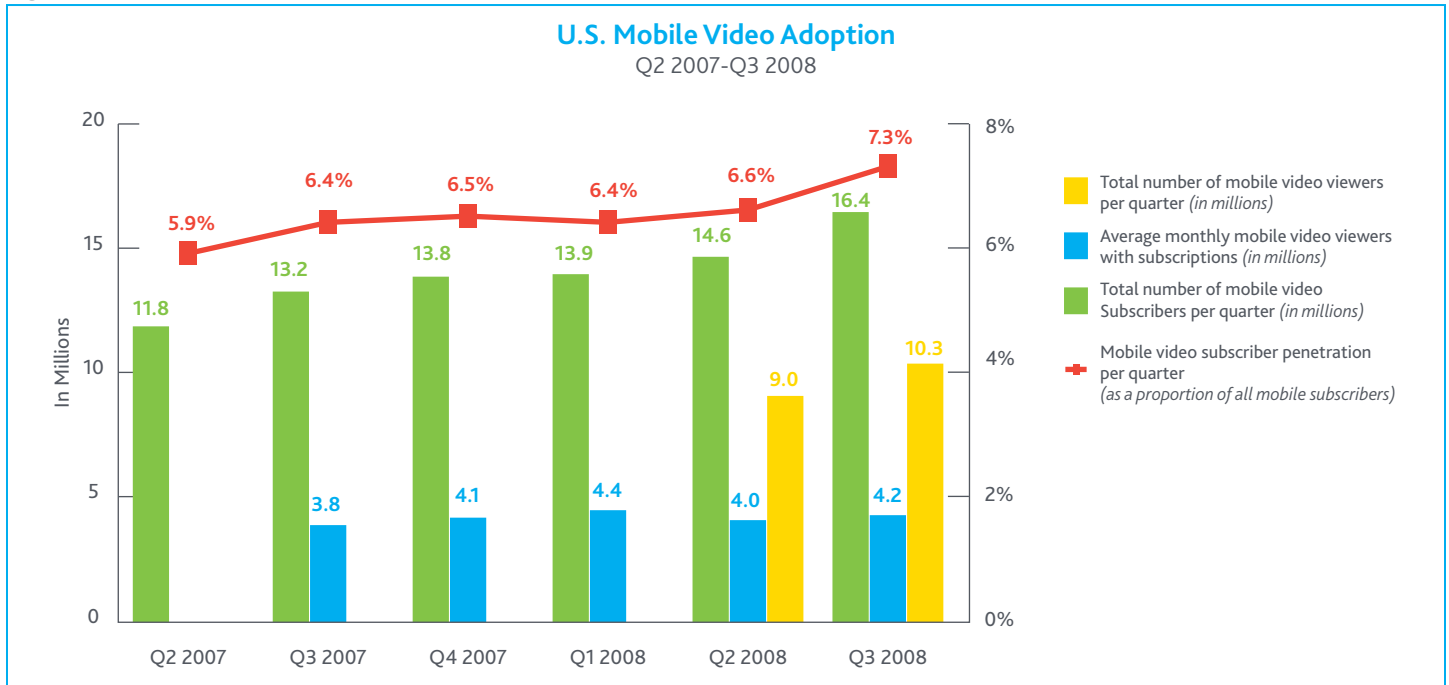
In 1984, the typical U.S. television household tuned about 50 hours of television per week. Today that household consumes more than 57 hours (add to that the two and a half hours a typical online video consumer will watch). The more content consumers have been given, the more they've consumed.

Importantly, this expanded digestion of video content did not come with an expanded amount of leisure time; expanding media consumption means finding other times and places in which to consume media. Today, 72 million American TV viewers time-shift their video content through the use of digital video recorders, and 13 million TV households use video on demand (VOD) each month. After time-shifting, comes place-shifting: unable to keep up, even with the aid of their DVRs and VOD services on their TVs at home, Nielsen estimates that as of October 2008, 121 million U.S. internet users watched video online at home or at work, consuming nearly 9 billion video streams per month. The website Hulu, a joint-venture website created by NBC Universal and News Corp where consumers can stream full episodes of their favorite shows, attracted 4.2 million internet users from their PCs in September 2008.

American video consumers are making time for video content like never before, and it is in this intersection of expanding demand and limited time that mobile video might find a rejuvenated sweet spot.

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Figure 1



Source: The Nielsen Company, Q3 2008 Mobile Video Report

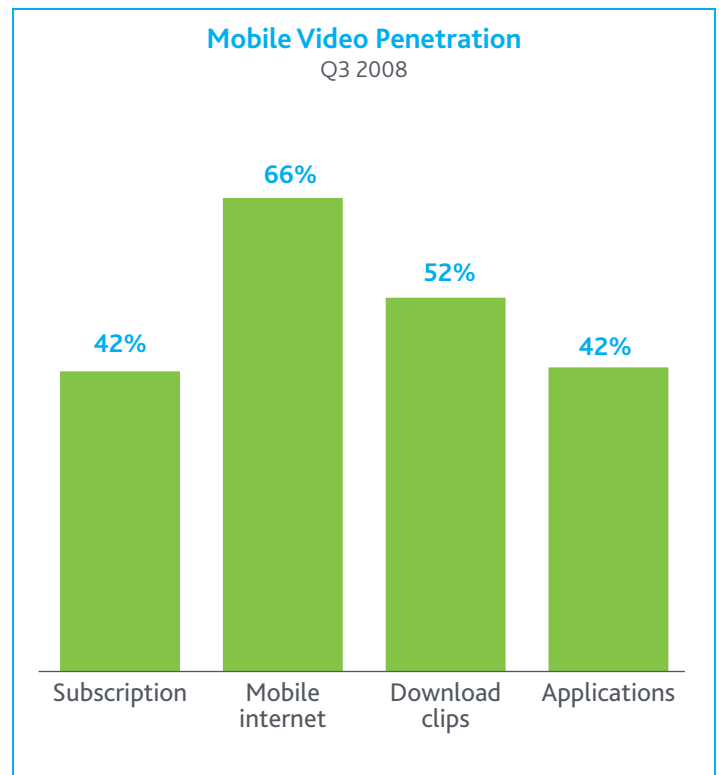
## The Audience Today

Today, consumers can access mobile video content over their phones in one of several ways: through the carrier “deck” or media portal on the phone as streamed clips (usually in a subscription video-on-demand model), streamed through either free mobile websites such as YouTube or subscription mobile Web applications such as MobiTV or broadcast directly to the phone through technology such as MediaFLO, a service of Qualcomm that allows subscribers to sign up for “live” TV through their mobile operator.

As of Q3 2008, 10.3 million U.S. mobile subscribers consumed video on their phone through at least one of these means. That number is up 14 percent over Q2 2008, when just 9.0 million subscribers watched video on their mobile phone. Much of that growth can be attributed to the expanded use of mobile Web-based video options. (Figure 1 shows the growth of mobile video in the U.S. over recent quarters.)

The most popular means of mobile video consumption, today, is mobile Web video that is accessed without additional subscription to mobile video: 66 percent of mobile video users say they consume their mobile video through mobile Web. (Figure 2 shows the Q3 2008 breakout of mobile video consumption by means of access.)

Figure 2



Source: The Nielsen Company, Q3 2008 Mobile Video Report

Forty-two percent of mobile video users access their video through a mobile video subscription to either their carrier's streaming or broadcast video service or a premium Web streaming service such as MobiTV. Overall, subscriptions to mobile video have risen to 16.4 million in Q3 2008 from 13.2 million in Q3 2007, a 24 percent year over year growth, bolstered by access to video through unlimited mobile packages that include mobile media.

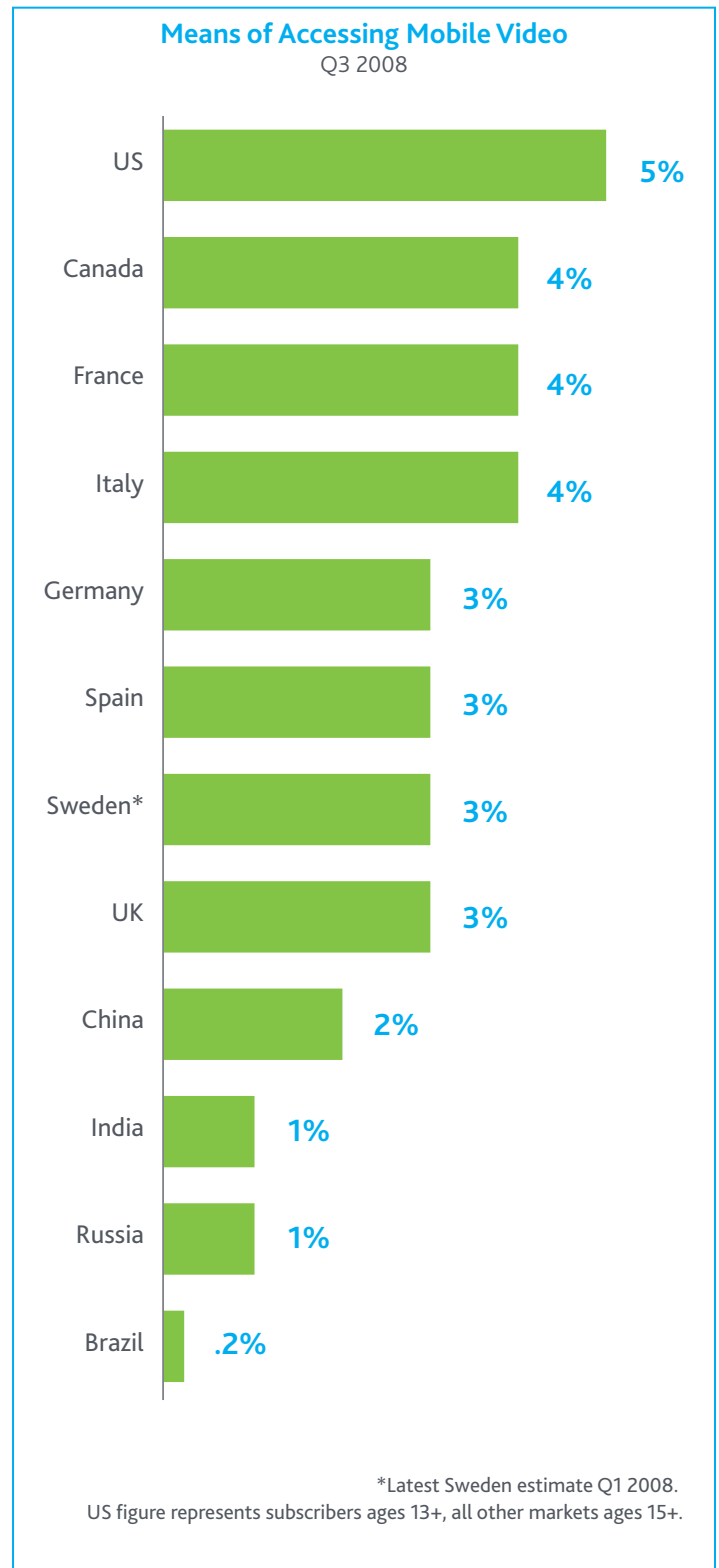
Today, there remains a large gap between the number of U.S. mobile subscribers who are subscribing to mobile video and the number who are actually using the service, though. If we look just at mobile video subscriptions, for instance, we see that only 26 percent of those subscribers who paid for mobile video services in Q3 2008 actually used their service at least once. Put differently, 74 percent might theoretically have been better off without their subscription to mobile video, which went entirely unused.

The typical mobile video subscriber in Q3 2008 paid \$7.23 for access to mobile video content, down slightly from \$8.32 in Q2 2008 and \$8.95 in Q1 2008. As more subscribers gain access to mobile video through unlimited data packages that include video, the average cost of mobile video through subscriptions has declined. Subscription mobile video still represents a sizable revenue stream for operators and suppliers, though. The total of all mobile video subscriptions added up to an estimated \$288 million in revenue for U.S. carriers in the third quarter of this year. Nielsen estimates that the most popular mobile video subscription service, today, is Sprint TV, used by an estimated 1.6 million mobile subscribers.

Though the mobile video market saw growth in 2008, the overall use of mobile video is low compared to other mobile media: internet, ringtones and games, for example.

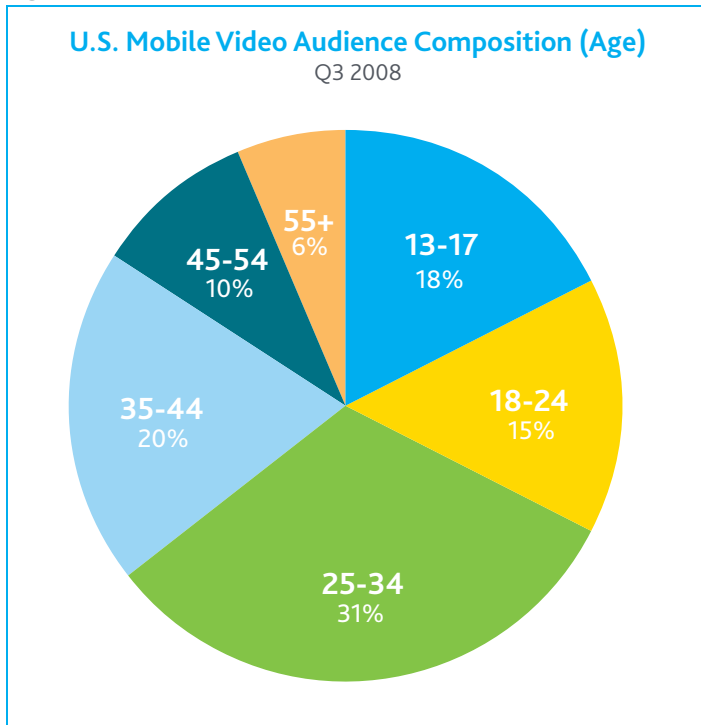
U.S. subscribers are not unique in their low penetration of mobile video. In fact, of the twelve mobile video markets tracked by Nielsen, penetration of mobile video consumption is highest in the U.S. at five percent, followed by Canada, France and Italy where four percent of mobile subscribers access mobile video each month. None of the markets Nielsen tracks have surpassed the 5 percent threshold of usage, but some estimates place penetration in Japan and South Korea, markets where Nielsen doesn't yet measure mobile video consumption, at nearer to 50 percent of the mobile market. (Figure 3 shows mobile video penetration in twelve countries where Nielsen tracks mobile video consumption, as of Q3 2008.)

Figure 3



Source: The Nielsen Company, Q3 2008 Mobile Video Report, Q3 2008 Mobile Media Marketplace reports (EU and BRIC)

Figure 4



Source: The Nielsen Company, Q3 2008 Mobile Video Report

In the U.S., there are some important, and expected, skews in the mobile video audience demographics.

- As of Q3 2008, the mobile video audience skews more male than female (60 percent male, while men make up just 48 percent of the total mobile population).
- Mobile video users are considerably more likely to be younger—64 percent of all mobile video users are under the age of 35, compared to just 35 percent of all subscribers. (Figure 4 shows U.S. mobile video audience composition in terms of age.)
- African-Americans and Hispanics continue to be disproportionately represented in the mobile video audience, when compared to the total subscriber base. As of Q3 2008, 14 percent of the mobile video audience was African-American (non-Hispanic) and 24 percent of the audience was Hispanic (compared to just 9 and 13 percent of all subscribers, respectively).
- From an income perspective, the mobile video audience is perhaps more balanced than we'd expect, considering surcharges and device needs. As of Q3 2008, mobile video users were just slightly more likely to have household incomes of \$100K compared to all mobile subscribers (28 percent compared to 22 percent).

Figure 5

Device	Share of Streaming Video Users
Apple iPhone	11.0%
Motorola RAZR V3 series (V3, V3c, V3m, V3i, V3i DG, V3)	5.1%
RIM BlackBerry 8100 series (Pearl, 8110, 8120, 8129)	2.8%
Palm Centro	2.7%
LG Voyager	2.6%
Samsung Instinct	2.4%
Motorola Q Series (Moto Q, 9h, 9c, 9m, Q Global)	2.4%
Samsung SGH-i607 series (BlackJack)	1.9%
HTC PPC-6800 (Mogul, XV6800)	1.7%
LG VX8500 series (Chocolate, VX8500, VX8550)	1.7%

Source: The Nielsen Company, Q3 2008 Mobile Device Census

Taken on the whole, the profile of mobile video users is broad enough to classify this medium not merely as a young, affluent man's medium. Though the audience skews young, we find an audience for mobile video content across the demographic spectrum.

From a device perspective, 109 million subscribers presently carry devices that are capable of viewing some form of video content. Among users, Apple's iPhone is already the most popular phone for mobile video consumers. As of Q3 2008, 11 percent of all streaming video users were using an Apple iPhone. Thirty-five percent of iPhone users in Q3 told us that they regularly used mobile video (compared to about five percent of all subscribers). After the iPhone, Motorola's RAZR V3 series phones are the next most popular devices on which to consume mobile video—5 percent of mobile video consumers access their content over a Motorola RAZR V3. (Figure 5 shows the top ten mobile phones among streaming video users in Q3 2008.)



## When They Watch

Anecdotally, the promise of mobile video always seems to come back to the vast amounts of mobile video that could be viewed while waiting in lines. Nielsen's data, though, suggest that the occasion for mobile video consumption is really much broader than this narrow, and perhaps rarer than imagined, opportunity. Indeed, when you stop to think about it, how many lines does one wait in during a typical day?

Yes, mobile video viewers report that they consume video while waiting for people or things, 59 percent say they do so, but 37 percent of viewers say they tune in to their phone while at home, 35 percent say they tune in from their bed and about one in four users say they occasionally tune in while they are exercising. (Figure 6 demonstrates the variety of occasions in which consumers say they consume mobile video.)

Considering the diversity of place in which mobile video is consumed, it is less surprising then to consider that mobile video viewers today are not necessarily watching for just short intervals. In Q3 2008, 54 percent of mobile video viewers reported average mobile video sessions of 15 minutes or longer. As reported in our recent A2M2 Three Screen Report, the typical mobile video viewer tunes into his or her phone for an average of 3 hours and 37 minutes per month. Between Q1 2008 and Q3 2008, that average time spent viewing among mobile video viewers increased 11 percent, from 3 hours and 15 minutes in Q1 2008. This, as content providers are making full-length episodes of television content available over mobile phones.

Mobile video viewers had a median 17 mobile video sessions over the course of a month in Q3 2008. Male users tend to use mobile video with greater frequency than females, 17 sessions median compared to 13. The frequency is also a bit higher for teen users, 22 media sessions per month and lower for users 55 and older, 13 sessions per month.

Looking at subscriber activity directly, through our bill panel analysis of VCAST video downloaders on the Verizon Wireless network, we're able to confirm that frequency—the typical VCAST video user downloaded an average of 17 VCAST videos per month in Q3 2008.

Figure 6

Top Occasions for Mobile Video Use Q3 2008	
Occasion	Mobile Video Users
When waiting for someone or something	59%
While traveling away from home	51%
While at home	37%
While at work/at school	36%
While in bed	35%
During my commute	33%
While eating	26%
When together or out with friends	24%
When all other available TVs are being used	23%
While working out/exercising	23%

Source: The Nielsen Company, Q3 2008 Mobile Video Report

## What They Watch

From a genre perspective, comedy makes the most popular mobile video content. Forty percent of mobile video viewers in Q3 2008 said they had watched comedy content, at an average of 10 minutes per session. Weather, music and sports are the next most popular genres of mobile video content, respectively. The appeal of a broad range of genres in mobile video is apparent: 17 of the mobile video genres tracked by Nielsen have attracted audiences of more than a million unique mobile video users, even including adult content.

As for specific brands of content consumed over mobile video, many of the leading television brands today are also the most watched brands in mobile video. As of Q3 2008, NBC is the most watched mobile video brand in the U.S., with 4.7 million mobile video users watching NBC-branded mobile video entertainment in the typical month in Q3 2008—46 percent of the overall mobile video audience.


After NBC, FOX, MTV, The Weather Channel, Comedy Central, YouTube and ESPN were the next most popular mobile video brands (reaching between 28 and 42 percent of mobile video viewers).

To dissect the top mobile video brand in Q3 2008 a bit more, let's examine the demographics and behaviors of NBC's mobile video audience for that time period. In Q3 2008, 61 percent of NBC's mobile video audience was male and 39 percent was female. That balance more reflects the overall skew of mobile video (60 percent male) than the typical NBC television audience, which skews just slightly female on a total day basis. As with the overall mobile video subscription audience, NBC's mobile audience covers a broad spectrum of ages, still with an extra saturation of teenagers. Twenty-one percent of NBC's mobile audience was between the ages of 13 and 17 in Q3 2008, compared to just 3 percent of their total day live television audience. Still, it's not just a teen audience. Thirty-four percent of NBC's mobile video audience was 35 or older in Q3 2008.

Directly-accessed television brands aren't the only leaders in mobile video. As mentioned above, a large subset of the mobile video audience today consumes mobile video strictly, or in supplement, through mobile Web, watching either user-generated videos or repurposed television content through their mobile

internet service. In Q3 2008, about 3 million U.S. mobile subscribers accessed YouTube through their phone, the leading Web video provider accessed over mobile devices. YouTube's mobile Web audience grew an astonishing 277 percent between October 2007 and October 2008. Other Web video players are starting to generate mobile audiences, as well. As of Q3 2008, Hulu, the aforementioned online video service cofounded by NBC Universal and News Corp programmed largely with existing television content, generated a monthly unique audience of 700,000 mobile video viewers, according to our most recent mobile video survey.

Both YouTube and Hulu skew male. Sixty-one percent of the YouTube mobile audience is male; 68 percent of Hulu's mobile audience is. Their audiences are young, too: even younger than the overall mobile video audience. As of Q3 2008, 73 percent of YouTube's mobile audience and 76 percent of Hulu's mobile audience was under the age of 35. As with television brands gone mobile, YouTube and Hulu exhibit demographic skews more closely aligned with the mobile video audience than with their standard PC traffic. YouTube's PC traffic, for instance, was just 52 percent male and just 35 percent under the age of 35, as of September 2008, compared to the male and youth demographic skews of their mobile traffic.



YouTube's mobile Web audience grew an astonishing 277 percent between October 2007 and October 2008.

## What They Want To Watch

Comedy is not just the most popular form of mobile video content today—it’s also what users want to see more of: comedy is the top aided category of interest among current users—though not by far. As of Q3 2008, 11 percent of mobile video users said they were interested in additional comedy programming, just ahead of music (10 percent) and full-length cinema-released movies (9 percent), each of which may reflect the current youth skew of mobile video. (Figure 7 shows the top ten categories of interest to mobile video consumers as of Q3 2008.)

## They Like It

Although usage frequency among mobile video users is relatively low (again, just 17 videos per month, on average), overall satisfaction with the mobile video experience is high among current users.

As of Q3 2008, 71 percent of mobile video viewers said they were satisfied with the mobile video experience. That number is slightly higher (77 percent) among those who are paying for a subscription video service and lower (67 percent) among those who access mobile video by other means. Mobile video users ages 18–24 also tend to be more satisfied with their experience than the typical user—76 percent say they are either satisfied or extremely satisfied with their experience.

Analyzing factors of audio quality, price, video quality, speed/reliability and available content, Nielsen found that video quality was the highest driver of mobile video satisfaction in Q3 2008, followed by price and number of channels available. Among those subscribers who said they were dissatisfied with mobile video, network and connection issues were the most frequently cited reasons. Twenty-nine percent of those subscribers not satisfied with the mobile video experience blamed it on a network or connection issue, followed closely by 22 percent who blamed it on an issue with their device. Asked what they would change about the mobile video experience, 49 percent of mobile video users in Q3 2008 said they would lower the prices and associated fees—the top factor of more than a dozen aided changes suggested to users. After price, battery life was a close second factor: 47 percent of all mobile video users say that a longer battery life would motivate them to increase the amount of mobile video they consumed. Less important drivers of increased usage were factors such as screen size, variety of programs or pause, stop and rewind functions.

Figure 7

Top 10 Categories of Interest for Future Mobile Video Programming Q3 2008	
Category	Percent of Mobile Video Users Interested
Comedy	11%
Music	10%
Cinema-released movies	9%
Action/adventure	9%
News	8%
User-generated content	8%
Movie trailers	8%
Entertainment news	7%
Sci-Fi/horror	7%
Sports	7%

Source: The Nielsen Company, Q3 2008 Mobile Video Report

Overall, network quality, costs and battery life appear to be the biggest pain points on the mobile video experience. Thankfully each of these is a challenge with foreseeable solutions. From a network standpoint, carriers have been rolling out 3G networks throughout the U.S. that offer data throughputs six times as fast as 2 and 2.5G networks. From a cost perspective, the average price paid for subscription-based mobile video has declined in recent quarters, and consumers are increasingly able to access professional video content through the mobile web, without additional fees on top of their data plan. With regard to battery life, perhaps the most fundamentally gating factor to mobile media consumption, immediate solutions involve the creative introduction of devices such as battery-powered cell phone cases that double the life of phones (Incase has introduced such a case for the iPhone), and longer term solutions to power limitations are being developed quickly. A group at Stanford says they’ve designed a battery that can extend the life of laptop and phone batteries tenfold.

Overall, current users of mobile video seem satisfied with their mobile video experience. What’s more, the experience of mobile video is improving, quite in line with consumer interests.

## Growing the Mobile Video Pie

Satisfaction among current users is good, but for the overall mobile video market to continue to grow, the whole pie will have to grow. Today, 10.3 million U.S. mobile subscribers use mobile video, leaving 214 million U.S. mobile subscribers who are not using mobile video. To consider mobile video's future one must first examine today's market through both a consumer perspective and through the mobile video supply-chain perspective.

Today, there is still a large degree of carrier control over the mobile video experience—a level of control that may have to loosen for the overall market to grow.

As we mentioned at the beginning of this paper, we believe there are three avenues for continued growth of the overall mobile video audience: mobile Web video, mobile digital TV and an improved advertising model around subscription-based video services. The latter is the most unlikely of the three growth drivers, but we believe all three are possible, and a combination of some of these three should grow the mobile video audience considerably in 2009 and 2010.



## Expand Mobile Web Video

Three million mobile subscribers accessed YouTube over their phone in Q3 2008, and many of those, more than two million, accessed the content directly through the mobile web by going "off deck" with their internet browser—an incredible audience considering our estimate that just 10.3 million mobile subscribers access any form of video over their mobile phones. The draw of YouTube over mobile Web is an indication that a large audience could exist for new mobile video channels when the price is right; namely, "free."

Forty-five million mobile subscribers in the U.S. accessed mobile Web in October 2008, and the overall U.S. mobile internet audience grew 41 percent year over year. Fueled by increasing smartphone penetration, improved customer experience thanks to 3G networks and the expansion of data packages, including "all-you-can-eat" wireless plans that provide mobile Web access as part of a larger bundle, growth of the mobile internet audience shows no signs of slowing.

Mobile Web has attracted a critical mass base of users who expect the same Web video functionality on their phone that they enjoy on their PCs. For mobile video to expand, we will need to see an even larger base of phones and browsers that allow for RTSP streaming (the current solution for streaming YouTube on phones) or Flash (the primary method of online video streaming).

Simultaneously, an expanded universe of mobile Web video offerings will be needed to help grow the market. Today YouTube and Hulu have successfully brought substantial Web video audiences to mobile. Further efforts to make online video, which is increasingly available on a broad array of sites by PC, also available to mobile users will help to attract new consumers of mobile video through mobile Web.

## Rollout Mobile DTV

The expansion of mobile Web video is a great means of introducing more subscribers to the consumption of video over their mobile phones—but even mobile Web video will bring its challenges. Most notably, streaming content takes up considerably more bandwidth than standard voice and data operations on the handset.

Cellular networks are busy these days, allowing for the transmission of never-before-seen levels of text messaging, e-mail, mobile Web browsing, downloads and other data services. Though 3G networks enhance operator ability to sustain this level of expanded communications, many believe that cellular infrastructure is simply not equipped (either technically or economically) to also deliver high quality video content for more than several minutes at a time to a larger base of users. In this regard, the relatively low uptick of streaming video through carrier subscriptions has bought the market time to consider what it would mean if 20, 30 or 40 million subscribers began accessing mobile video on a more frequent basis through carrier networks—either intentionally or conveniently, the mobile video market seems throttled at the same time carriers are considering how best to meet larger-scale interest in mobile video, should it arrive. We believe that a noncellular scheme is critical for mobile video to scale.

Today, MediaFLO is the best example of a noncellular, broadcast means of mobile video delivery. A service of Qualcomm Inc., MediaFLO provides a lineup of continuously broadcasted, national content to subscribers of Verizon and AT&T in the U.S. Subscribers to MediaFLO services pay around \$15 for access to networks such as CNN Mobile, CBS Mobile and Comedy Central. Subscribers tune into programming that is running continuously—joining a program as they would on their television. What consumers don't get through MediaFLO and similar models, but one might expect from a broadcast model of mobile video, is access to their local TV stations. A group called the Open Mobile Video Coalition (OMVC) is working to change that, though.

The OMVC is an "alliance of U.S. commercial and public broadcasters formed to accelerate the development and rollout of mobile DTV products and services." Working with players across the ecosystem, the OMVC is hoping to bring digital broadcast television to an array of portable devices that includes not just mobile phones, but also laptop computers, MP3 players, GPS devices and in-car entertainment systems. Following the recent approval of the mobile DTV candidate standard by the Advanced Television Systems Committee (ATSC), the OMVC plans for extensive interoperability testing and trials in various markets nationwide in the months to come. Already OMVC members have conducted tests of mobile DTV in Chicago, Raleigh-Durham and Denver.

Some consumers appear to be interested in the mobile DTV approach. In a study conducted earlier this year at CBS' Television City in Las Vegas, we found that 33 percent of respondents ages 11 and older were interested in this type of mobile video service on any device—higher among males (40%) and teens (44%). Among other devices, mobile phones followed only laptops in terms of specific devices on which consumers would like to see mobile DTV. Forty-nine percent of respondents said they would like to see the service specifically on a laptop, while 25% said they'd like to see the service on phones.

The business model could go a number of ways. Wireless carriers could approve premium handsets that are capable of receiving these noncellular transmissions without subscription (though device manufacturers should make note that subscribers aren't inclined to pay extra for a device with this service). Or, more likely, carriers will charge fees to those who want to receive the digital TV signals on their phones. Though mobile video subscriptions—both for streaming clips and live TV—are still just a tiny portion of carrier revenue, it seems unlikely that carriers would put this revenue at risk by allowing consumers to access local digital TV, free of charge, even if the channels would primarily promise to offer local mobile content.

We believe the subscription-based mobile DTV model would be the wrong way to go, though. Consumers are today largely unwilling to pay subscription fees for premium, national content—do we expect that they'd be willing to pay for their local news and weather, which they understand to be free through broadcast technology?

For mobile video to continue growing, mobile DTV must be made widely available to wireless consumers at little or no additional cost. Consumers' best hope is that device manufacturers such as LG and Samsung, who are currently testing mobile DTV devices, will remain committed to bringing this technology to market. We must hope, too, that at least one forward-looking operator will see the opportunity to be the first (and potentially exclusive) carrier to come to market with a handset that can access free mobile DTV. The carrier who steps up to that plate will show that they understand the innate benefits of growing the mobile video audience: mobile DTV allows this mobile medium to grow without further burdening the cellular networks, and it introduces an extended audience to the world of mobile video. In turn, this creates an expanded market of mobile video users to whom carriers can sell premium levels of video content.

Mobile video users were twice as likely as a typical mobile data user to say they've responded to some form of mobile advertising.

### Subsidize Subscription Based Video Services with Advertising

For mobile video use to expand, the experience may have to cost less, on average. Mobile Web video options allow consumers already subscribing to e-mail and data packages to access video content without additional subscription fees, and mobile DTV allows advanced device purchasers to access local TV content without additional subscription fees.

It might sound as though we don't want anyone to make money in mobile video. In fact, we expect the business of mobile video to grow quite healthily, turning profits for carriers, media companies and device manufacturers. The key, of course, is advertising.

In our Q2 2008 Mobile Advertising Report we noticed something interesting: although most mobile data users are reluctant to say they are "open" to mobile advertising, one group responded quite differently: mobile video users. In Q2 2008, active mobile video users were three times as likely as a typical mobile data user to find mobile advertising "acceptable"—they were also more than three times as likely to say they found the advertising trustworthy. Receptivity is one thing, but more importantly, we found that mobile video users were twice as likely as a typical mobile data user to say they've responded to some form of mobile advertising. All of this is to say, while scale and process favor mobile Web and SMS in today's mobile advertising market: mobile video remains an untapped and highly attractive mobile advertising opportunity.

The third potential way that mobile video's universe can expand is an improved model around advertising subsidization. Today mobile video subscriptions are a costly luxury, bordering on novelty. Speculation abounds to the stability, let alone growth, of the mobile video market as the economy tightens. Overall, we see signs in our bill panel of consumers watching their mobile expenses, avoiding overage and roaming and other such variable extras. While mobile Web and e-mail may be on an inevitable slope, already reaching a critical mass of more than 40 million active users, can we say the same for mobile video? In today's economic times, in particular, the need for mobile video services to be delivered at little or no additional cost is palpable.

Unfortunately, today's levels of usage for carrier-delivered streaming video may not support a strong ad-supported model. To oversimplify the business model, but to illustrate the potential, let's imagine that a carrier wants to subsidize half of the subscription fee through advertising revenue. The average subscriber today pays \$7.23, but what if carriers decreased that fee to \$3.62 and earned the remainder through advertising sales? If the typical streaming user downloads 17 clips in the course of a month and the carrier wants to earn \$3.62 off of those impressions by pushing one ad per clip, it would require a CPM (cost per thousand impressions) of \$212, or roughly eight times as high as a typical household CPM for primetime broadcast television. Would a targeted mobile video ad be worth more than ten times a broadcast television ad? The likelihood of carriers selling a nascent form of advertising at \$212 CPM seems unlikely. The only way to improve the CPM but retain the revenue (or grow it) would be to drive a greater frequency of use among subscribers. When 16 impressions becomes 32, or about just one ad a day, on average, the economics of ad revenue replacing subscriber revenue become a bit more realistic. When 16 impressions become 64, on average—carriers may actually find more revenue in advertising than subscription.

All of this may seem like more work than it would be worth to a carrier, but if carriers want to retain some portion of mobile-video specific revenues, the carriers may not have a choice but to lower the average subscription rate for the service (which they arguably are already doing through unlimited packages). As streaming on the mobile phone through mobile Web becomes more and more accessible, the likelihood of subscribers continuing to pay extra to download similar types of content over their phone seems slim. Instead of holding their ground, carriers may do well to rethink their pricing structures for mobile video into a model that better incorporates advertising subsidization and keeps some degree of subscription-based mobile video compelling. By doing that, carriers will remain integral in the overall mobile video economy and help to grow the overall audience of mobile video users. As with the need to allow for Mobile DTV broadcast, doing their part to grow the overall mobile video audience will help to increase their market potential for more premium forms of mobile video content in the future. And, as with mobile digital TV, let the importance of differentiation not be understated: the carrier with the cheapest, best mobile video package will attract a certain subset of advanced data users to their services—subscribers who carriers all agree are worth courting.



## The Future of Mobile Video

We believe mobile video has reached a certain plateau, subscriptions will slow and mobile Web video will be the major source of any growth in the medium. Left to evolve without instigation, the market for mobile video would struggle to expand further in the coming years. Above, we've offered three elements that we believe could fuel a more rapid expansion of mobile video. Together, they make up the mobile video world of the future, as we see it; a future where device manufacturers, media companies and mobile carriers all capitalize on the unceasing demand of consumers for video content, whenever and wherever they want it.

If recent years have taught us anything about media consumption, it's that content is 'King,' but consumer choice and control may be 'Prime Minister.' That is, consumers today expect more choice and control in their media experience, and mobile video will be no different.

The scenario we envision for consumers is one that provides mobile Web video of the same caliber and quantity to that which is viewed on a PC, live broadcast television of local stations through mobile DTV and national, premium content to subscribers through ad-subsidized carrier subscriptions to either live or streaming video content. The three pillars of mobile video's future are not mutually exclusive and indeed rely on one another to grow the overall audience for mobile video.

The 1966 *Columbus Dispatch* article quoted at the beginning of this paper was mostly bullish about the significance of Motorola's mobile television. At the end of that article, though, the reporter writes this, "Now that the company has the teeniest TV ever built, they're a little at a loss as to what to do with it. It probably won't make a consumer product for years to come."

Has the time come for more ubiquitous use of mobile video? It has, but only if the market can cooperate to move beyond mobile video's plateau and make the medium an affordable and engaging experience for a broader audience of viewers.



## About The Nielsen Company

The Nielsen Company is a leading global information and media company providing essential integrated marketing and media measurement information and analytics and industry expertise to clients across the world. Nielsen maintains leading market positions in marketing and consumer information; television, online, mobile and other media intelligence; and trade shows and business publications (Billboard, The Hollywood Reporter, Adweek). Nielsen is a privately held company and is active in more than 100 countries, with headquarters in New York, USA. For more information, please visit, [www.nielsen.com](http://www.nielsen.com).

## Contact Us

For more information on these insights or other mobile media research:

Nic Covey  
Director of Insights  
Telecom Practice  
The Nielsen Company  
312-385-6718  
[nic.covey@nielsen.com](mailto:nic.covey@nielsen.com)

