Introduction

Movidity is bringing the future of multimedia to the mobile world, today.

In the world of video, television has become known as the first screen, and the PC as the second. But it is the third screen, the mobile device, which is capturing the imagination of evolving consumers. While the third screen opens up many exciting possibilities, all is not necessarily well with the current state of this new medium.

While bit streaming technology has become ubiquitous on broadband networks for video & audio media, its use on low bandwidth / variable quality networks and constrained mobile devices is, at best, challenging.

The current offerings of television and long play video / audio media delivered to mobile devices over existing wireless networks are somewhat underwhelming. Low frame rates, "choppy" video, slow channel switching, out-of-sync audio and lack of content results in a mediocre user experience – one which severely affects the "stickiness" of such offerings. Clearly, today's technology does not enable the true potential of the third screen.

INSIDE

EVOLUTION OF THE WIRELESS PROVIDER

The rapid growth of mobile communications has created significant opportunities, along with highlighting a number of constraints. The prospects are evident in the forecasted global sales of cellular phones – over 800 million units in 2006 – with voice services in some countries almost entirely driven by cellular wireless.

This fact hasn't been lost on wireless solution providers, from network operators and manufactures to value added service providers, who are striving to meet demand while maintaining profits. This last point is significant – standard voice related services in developed wireless markets have been driven to mass consumer levels with associated competition and margin pressures.

Today, the challenge surrounds maintaining a reliable service delivery infrastructure at acceptable operational costs, while continuing to re-invest in future service capabilities. This balance of capex / opex versus revenue is driving the need to maintain and increase the Average Revenue per User (ARPU) factor. Margin pressures on typical voice services deny this need; hence the evolution of profit generating features such as ringtones.

The search for ARPU boosting services and features is best served by leveraging existing delivery and support infrastructure, thus enhancing the even more important AMPU – Average Margin per User.

Layering other value-added services, such as multimedia, upon an existing cost base significantly enhances margins and is an area where all wireless services providers must focus. Simply put, the challenge exists in both the economic and consumer domain; how to create a sustainable economic model that will drive ARPU / AMPU with services and features that are desirable to the consumer.

As in most businesses, wireless services evolution is somewhat like an arms race; providers are sprinting for the next ARPU / AMPU boosting features to create differentiation – hopefully one that will take their competition significant capital outlay, process changes and time to execute.

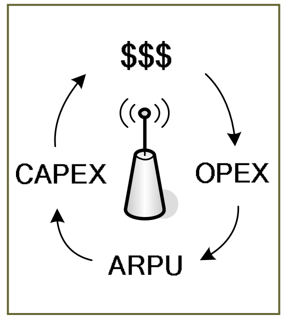
Wireless carriers are also looking to other non-traditional value models to increase revenue and / or reduce operational costs, including the layering of third party MVNO's (Mobile Value Added Network Operators) atop of existing infrastructure. MVNO's can provide diverse mobile service offerings along with potentially strong branding, leading to service bundling opportunities.

Evolution of the Content Provider

The prospect of new presentation mediums is creating opportunities for content owners and creators.

Interactive multimedia capabilities can provide new, dramatic options to content on the third screen. Integrating concepts like audience participation or

"at practically any scale, Movidity eliminates most of the hurdles of wireless multimedia"



Movidity helps to alleviate the challenges of the wireless financial cycle.

promotional campaigns builds a more immersive, connected experience. Mobile user based features such as PVR, and camera control (for surveillance) provides the ultimate in user capability and "stickiness".

Existing content properties now have an extended life thanks to the third screen. Live and archived audio-video content has the opportunity for new audiences and viewing modalities. Prospects abound for new revenue streams from older repurposed / reformatted content.

Consider the plight of terrestrial broadcast radio – a mainstay medium for the last 80 years. The onslaught of digital satellite services, with their multitude of tailored programming choices is threatening traditional radio. Instead of going extinct, why not develop a new delivery medium for radio (in addition to the Internet)? Why not allow mobile users access to their favorite radio stations from their existing cell phone – whether they're at home or traveling abroad?

Developers of media content are keenly aware of the ever increasing costs of producing, marketing and distributing their content. Over time, margins have been squeezed due to the number of hand-offs in the value chain between creation and consumer. Internet and mobile technology is forcing the simplification of these legacy distribution models. In the future, content owners and aggregators will be empowered with more control and greater margin retention by delivering content directly to consumers and cutting out the "middle-man". In cooperation with network operators, a complete delivery chain will be established.

Wireless Multimedia – The Next Wave

We are now on the doorstep of the next evolution of wireless services, that being multimedia (in the form of video and audio) to the handset. Wireless multimedia has garnered the attention of service providers, corporate enterprises, content owners / creators and individuals.

A multitude of applications becomes apparent when considering the third screen. These include:

Video-on-Demand (Broadcast & archived)

- Television (all broadcast media)
- Advertising
- Promotional (retail support, barcodes)
- Training
- Corporate distribution
- Interactive guides
- Security / Safety (surveillance, notifications)
- Two-way control (automation, inspection)

Audio-on-Demand (Broadcast & Archived)

- Radio (terrestrial, satellite, internet)
- Music (online, archived, internet)
- Content (podcasting, etc.)
- Corporate distribution

Personal Empowerment

- Video (archived content, personal media creation / delivery)
- Audio (archived music, online sources redirected)

Although service providers have made basic strides in some of these areas using existing technology, true personalization for the inclined user (i.e. allowing access to personal media) is still a pipe dream. Coupled with the economic realities of the majority of wireless infrastructures and mobile devices in existence today, usable wireless multimedia features and services are generally less than practical.

Third Screen Content Considerations

The rising interest in mobile multimedia has spawned a nascent industry whose goal is to create (or re-purpose) content specifically suited to the third screen.

The limited amount of screen "real-estate" available with current mobile devices places a number of practical constraints on video content. While any video content can be displayed, that which is more suited to a small screen (under 8x8 cm) would typically reduce or minimize the following due to available resolution and / or video frame rate:

- Wide shots
- Broad panning & sweeping
- Fast panning
- Small text (still or scrolling)

It's anticipated that in the future, these considerations will be taken into account by content creators, whereby editors will produce a "small screen cut" of normal content, specifically formatted for limited screen sizes.

Live content providers such as news channels could elect to remove screen tickers displaying small text news updates. Conversely, in the case of sports content, statistics could be enlarged and transparently overlaid at intervals during the programming (this might also be called up on-demand by the user, via two way capability).

An ongoing debate also raises the issue of content duration suitable for the third screen. Consumer profiles vary in terms of the desire to watch long-play content (such as movies) on a small screen. It's expected that the industry will adapt to create (and format) content that matches consumer tastes as the market evolves and increased choice in content becomes available.

Unfortunately, common streaming technologies exacerbate the issues of video on the third screen, requiring even more consideration to limiting content as discussed.

Broadcast mobile TV – The Pitfalls

There are a number of evolving and competing methods to deliver TV broadcast services to mobile devices, including DVB-H and FLO. These methods typically require new allocations of frequency spectrum, new handsets and new media management schemes. Overall, the roll-out of such services is a multi-year, multi-billion dollar ordeal that, in the end, still only offers limited, force-fed media content.

Is the industry listening to consumers? It appears not. *Consumers have voted* - they want to watch and listen to the content of their choice, at a time and place of their choosing. They typically don't want to spend more than $500 on a new handset, and they don't necessarily want to watch the same television channels as they do at home, on someone else's broadcast schedule. Do these "new" broadcast services satisfy any of these requirements? It doesn't appear so.

Availability – The more, the better!

Most mobile devices are incapable of running traditional streaming video / audio - less than 20% of cell phones in the hands of subscribers today are fully hardware enabled to support on-line multimedia. This presents a challenge; enabling new services and features is an excellent way to increase revenue and margins, but if it's only available to a small percentage of subscribers, then what?

If new, desirable services could penetrate a greater percentage of subscribers, then the probability of success increases dramatically.

Not only must these services be desirable to the consumer, they have to be economically feasible to the provider while at the same time reaching largest audience possible.

Wireless markets in developing nation's presents an enormous opportunity to those who can create and deliver services on today's networks to lower cost mobile devices.

Movidity – The Enabler

Movidity aims to change the wireless multimedia value equation – through the application of our innovative technology along with the ability to leverage existing cellular wireless networks and the Internet. Our approach disrupts the existing economic model for value-added services and scalability.

Specifically, Movidity enables feature rich multimedia services that positively impact ARPU / AMPU while satisfying the following:

- Minimal capex – service introduction requires little capital planning.
- Minimal opex – simple, self supporting technology leverages existing operating infrastructure).
- Ease of deployment – fast rollout with minimal planning efforts.
- Ease of scalability – start with low subscription density and grow to practically limitless users.
- Broad Availability – works with a wide range of mobile devices, not just more expensive media-enabled devices.
- Performance – video / audio performance, embedded DVR, interactive, self managing.

At practically any scale, Movidity eliminates most of the hurdles of wireless multimedia deployment.

Broadcasters, mobile device manufacturers, carriers, MVNO's, content owners / aggregators and even individuals can now leverage the power of Movidity to truly enable the third screen.

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