

nellymoser

Mobile 2.0
Are You Ready?

By John Puterbaugh
Founder and Chief Strategist, Nellymoser



CONTENTS

Mobile 2.0 Services	3
Mobile 2.0 Enablers	5
What Mobile 2.0 Means For Your Business	6
Technology Enabler Requirements	9
Conclusion	10



Mobile 2.0 has many definitions - most irreconcilable. Often the term Mobile 2.0 ends up being offered as a quick answer to all of the problems surrounding wireless. Yet true Mobile 2.0 services, as defined by mobile industry veterans, will bring together the social web – both a byproduct and major contributor towards the creation of Web 2.0 services - with the uniqueness of mobile to create new, different, and vastly improved experiences for mobile consumers.

Mobile 2.0 is also tightly linked to existing web technologies making it easier for developers to create new mobile services. In this report we outline what Mobile 2.0 is; what will enable it; what it means for your business; and what requirements are needed by technology enablers to effectively launch Mobile 2.0 services. We believe that this year will see true Mobile 2.0 services emerge. For more discussion, join us on our blog: [Mobile 2.0 and Emerging Mobile Media Services](#)

MOBILE 2.0 SERVICES

The next evolution of mobile will marry the best of the “old” communications and media channels with the unique aspects of mobile devices and networks. Mobile 2.0 Services will integrate the social Web with the core foundations of mobility - personal, localized, always-on and ever-present.

The social web has finally made users the central focal point. Ajit Jaokar and Tony Fish describe Web 2.0 as “the intelligent Web or harnessing collective intelligence.” They continue, “The rise of ‘User Generated Content’ online, where users are given control of the content creation process, is creating a second wave in the digital media field.”

Scan any media industry or business publication and the breathless reverence for all things community, user generated content, and social networking confirms what most already suspect - the social web disrupts.

Larry Weber, in his book *Marketing to the Social Web: How Digital Communities Build Your Business* uses the term “social web” to denote how the Internet has evolved into a “social digital space.” The social web takes place in “a world of transparent content, mostly user-generated, broadband, rich media, and available on multiple devices.” Weber notes, “The social web will become the primary center of activity for whatever you do when you shop, plan, learn, or communicate. It may not take over your entire life (one hopes), but it will be the first place you turn to for news, information, entertainment, diversion - all of the things that the older media supplied.”

The social web is a social digital space in which individuals have read/write permission thereby easily assuming changing roles of creator, distributor and observer in an open, frictionless distribution as well as access environment.

As the social web intersects with mobile touch points, mobile devices will naturally enable and restrict consumer behavior. Accessing Web 2.0 services on a mobile phone - updating a limited profile here; scanning an edited 14 second clip there - is not considered Mobile 2.0.

As mobile devices and networks are vastly different from prior communications and media channels Mobile 2.0 Services cannot simply provide another way of watching TV, listening to the radio, or even social networking.

Originally designed for talking, mobile phones have morphed allowing texting, browsing and taking pictures and videos all from one device. But they are limited due to screen size, navigation, memory and processing power. While handsets will evolve over time, there are core differences that will remain constant and define how consumers interact with media and mobile services.



What makes mobile phones unlike anything that previously existed is summed up by the central principles of mobility:

Personal and Individualized

Mobile phones, for the most part, are used by an individual - the entire ringtone and wallpaper market grew out of a desire to express individual identity. As consumers access more media and more services through their mobile phones, they will demand faster access to media, data, and services that are relevant to them. Unlike the Web viewed through a PC with a large screen, keyboard and mouse, mobile users need to be presented with relevant choices quickly. They will not accept generalized access that requires many levels of menus to get to the specific artist, news, or video that interests them.

Localized and Relevant

Again, unlike PCs, mobile phones know the users location without requiring any information entry. Combining localization with personalization, mobile devices offer the service provider or advertiser the opportunity to contextualize their offerings while respecting privacy. Sports services can offer the latest Red Sox scores to a Boston-based user traveling in LA; even helping them - within a few clicks - find a local sports bar to watch the game.

Always-on and Ever-present

Designed for mobility, these devices are with consumers all the time. More and more, consumers feel out of touch with their social network when separated from their mobile phones. As integration between PC and mobile services becomes more prevalent, the mobile phone will evolve to be the primary vehicle for the discovery of content and services; the remote control for all things digital; and a personalized point of access for distribution of media and data. It will be the consumer's continual connection point with the digital world and with their social network.



MOBILE 2.0 ENABLERS

As momentum behind Mobile 2.0 builds, three primary enablers or drivers are identifiable that push both consumers and developers into the next evolution of mobile services. They parallel the enablers for Web 2.0 - yet are somewhat different.

Ubiquitous Mobile Broadband Access

Once consumers can access mobile services through 2.5 and 3G enabled phones at a reasonable price point, demand will grow exponentially. Like the evolution from dial up web to full broadband access, the richness of the services that can be created on 3G phones is dramatically different from those available on lower end phones. Services beyond voice and ringtones will become a "must have" as flat-rate pricing, advertising support, and content or service bundles dramatically reduce consumer cost.

Affordable, unrestricted access to enabling software platforms, tools & technologies

Today, the barriers to developing and deploying mobile services are high. Web 2.0 services rapidly emerged and thrived because services could be created and deployed easily. Unlike web development, developing mobile services requires knowledge of proprietary network protocols and device operating systems - and an advanced engineering degree. In addition, to reach a broad audience requires deployment and porting services across networks and devices.

Open access with frictionless distribution and monetization

Deployment of mobile services requires long, arduous negotiations with network operators or the risks associated with an off-deck distribution strategy. Monetization requires connections with ad networks, carrier infrastructure and 3rd party billing systems. When it becomes as easy for content owners and web developers to develop and deploy to mobile as it is for them to develop and deploy to the web, we will see the supply of services grow exponentially. The marriage of improved consumer access with easier development and distribution will push the mobile data industry over the chasm and into the tornado.

All the factors mentioned above combined with the introduction of a new generation of mobile phones will provide:

Rich, Interactive Enablement

Designed as a two way communication vehicle, much of Mobile 1.0 was one way - distributing content such as ringtones, wallpapers, music, information, and videos to the consumer. Mobile 2.0 will return the device to its original use - two-way communication. Dynamic services will empower consumers to participate in communities or social networks, share media and express their opinions.

Integrated Consumer Touch Points

Most devices now include a built-in camera. More and more devices include full keypads and color displays. The new mobile phones are integrated devices for talking, texting, capturing, sending, listening and viewing. While PC's can do all that, they are difficult to transport and require peripheral devices that are cumbersome to attach and install.

It is these unique attributes of mobility combined with what we have learned through the social web phenomenon that defines Mobile 2.0 services. Mobile 2.0 services will provide consumers with mobile entertainment; mobile connections to their social network; mobile connections to their digital world; and mobile tools to help manage the ever increasing complexity of mobile lives.



WHAT MOBILE 2.0 MEANS FOR YOUR BUSINESS

Paralleling the social web and leveraging the core foundations of mobility, Mobile 2.0 services will significantly improve the user experience and dramatically improve consumer acquisition and retention. This will be compounded by services that will take advantage of and be designed specifically for the mobile channel.

Rich Experiences

Mobile 2.0 services will offer a richer experience. Not only will the content include rich media, the services themselves will be much more engaging. They will be personalized and interactive. They will connect the user to their own social network or to specific communities allowing the consumer to read others' ideas and express their own opinions and thoughts.

Currently, MTV Networks' Comedy Central Take Out offers consumers on-demand video and audio integrated into an interactive entertainment and commerce mobile service. Consumers can watch episodes from shows like the Daily Show, Reno 911, South Park and the Colbert Report, listen to stand up radio, download ringtones and wallpapers, find jokes, play games and review TV schedules.

South Park Mobile further extends this so users can participate in message boards, read blogs written by people "behind the scenes" and send questions to employees and get responses. These interactive features engage audiences with rich experiences. Researchers have found that well designed, rich user experiences positively charge a user's emotions during interaction. In more simple terms, if a user feels good during an experience they are more likely to remain in that experience.

Easy to Use with Emphasis on User Experience

Mobile 2.0 user interface design, personalization, location-awareness, and content correlation will drive consumers to relevant media and information quickly. A recent US study by research firm Strategy Analytics found that the number of clicks a consumer was required to make to buy a ringtone on their mobile phone ranged from a best of 18 to a staggering 39 clicks for the category laggard. With Mobile 2.0 services consumers will be able to discover new artists and then purchase the correlating full track download and video within a few clicks - redefining usability and the user experience.

Existing mobile services like Virgin Mobile US' Headliner already use cross correlation to help users navigate through vast amounts of content and find related items. Cross correlation enables the user go to one central place, an Artist Page in this example, which provides them with a view of all relevant information, ringtones, music clips and tour dates - without regard to where it resides.

This contextual way of relating content through the use of meta data is an important method which can facilitate navigation, cross selling, and content packaging. Bringing the content directly to the user in convenient ways creates a service that is much less frustrating for the consumer and offers increased cross selling opportunities for the service provider.

Personalized

Mobile 2.0 services will also be personalized. Users will be able to state preferences, tailor content and sign up for alerts. Services will monitor activity in order to present relevant content and advertisers will leverage consumer preferences and behavior to drive meaningful messages and offers.

Contemporary mobile services like VIP Access already allow users to easily bookmark content they find relevant so they can get to it more easily and drive relevant recommendations. This method of saving content to a profile



accomplishes two things: it provides the user a way to more efficiently navigate large amounts of content, and it adapts the service to a user allowing them to create their own “mediaspace.” When combined with effective search, a service can be bookmarked, searched, and filtered based on the user’s unique and very personal preferences. The more users invest in building profiles and an identity the less likely they are to abandon it. Not only does personalization drive uptake and user satisfaction, it also reduces customer churn.

Localized

More and more services will also take advantage of location. Consumers’ base location will drive preferences like sports teams or news bulletins. Consumers’ dynamic location will drive automatic responses to location-aware queries for directions or weather and time-sensitive offers from local retail establishments.

Currently mobile services like VIP Access allow simplified personalization based on location. Enter your current location and only concert dates and information relevant to that location will be displayed. Much mobile content is consumed while waiting in line, sitting on a bus, or waiting at a restaurant for a friend. These experiences are measured in minutes, not hours. Every moment spent searching through irrelevant content is a moment the consumer is closer to leaving and adopting a different service entirely. Keeping the user closer to relevant, contextual content succeeds in providing them with a compelling and usable experience.

Interactive

Consumers will also engage more deeply with services through interactivity. They will vote, respond to polls, and interact with communities. Interactivity is an integral part of current successful mobile services such as VIP Access. From voting and polling to trivia and quizzes, the service offers ways to get consumers involved, provides them with a voice, and provides them with a way to show off their knowledge.

Today the mobile phone is used to organize social groups. This will continue as PC-based social networking goes mobile and mobile services are connected to PC-based social networks. South Park Mobile already enables on-phone communities through message boards. Personalization and user generated content allows consumers to express themselves and build an emotional bond with the mobile service - but this bond is nowhere near as powerful as when community enters the equation.

Social

To the relief of consumers mobile will no longer be a separate channel. Mobile services will be connected with their PC-based service companions. Preferences stated in a PC service will be reflected in mobile and vice versa. Content accessed in one will be available in the other. Imagine finding a new artist on VIP Access or Virgin Mobile US’ Headliner, listening to some samples, seeing that there is a concert in your town next month and then sending it out to your PC-based social network before buying a block of tickets - or by searching for a concert on your PC by accessing your favorite mobile music service online.

Multi-platform

While Mobile 2.0 will be a revolution for consumers, it will not be one for developers. Development environments will leverage existing common Web technologies and tools for service creation and utilize mobile platforms to provide optimized, frictionless delivery and distribution.

Standard tools and technologies for development

Rather than recreate yet another set of development standards, languages, and environments, Mobile 2.0 will take advantage of those already in place for Web development. A plethora of developers already have JavaScript, HTML, CSS,



and XML skills including familiar technology environments that let them design and develop web sites and services. Mobile 2.0 will enable them to leverage their current skills and technologies to build the next wave of mobile services.

Open, accessible enabling platforms

The mobile industry can no longer remain hostage to undocumented, closed platforms, operating systems and middleware application programming interfaces. Currently, over 90 % of mobile phones world-wide use proprietary operating systems with numerous undocumented and protected API's. But this is about to change with Google's Android, Apple's iPhone and Symbian leading the way.

Frictionless distribution

Mobile 2.0 will emerge without widespread standards, but will offer 3rd party developers more options for documented, open interfaces and operating systems. Once these are available, those developers using the skills and tools they already know will be able to more easily integrate the various components required to deliver complete mobile services and integrate them with current PC-based services.

Extensible applications and services

However until standards are in place and walled gardens open, middleware platforms and managed services will continue to support Mobile 2.0 developers and content providers. Those platforms will perform critical functions such as porting and optimizing services across networks and mobile devices. They will also connect services with advertising networks, billing systems, carrier infrastructure and manage, monitor and report service activities. Alas the fragmentation of the mobile channel will not be solved by the time Mobile 2.0 has arrived. These middleware platforms and managed services will be the mechanisms for managing fragmentation and by which a more frictionless mobile channel emerges.

Much of the recent buzz and excitement on the web involves extensible services - services that can be augmented with widgets, plug-ins and gadgets - creating new options for users at a rapidly growing pace. Creative enthusiasts, users and developers have created viral marketing and developed economies for services on the web. These same capabilities will be an integral component of simulating the development, demand and adoption of Mobile 2.0 services.



TECHNOLOGY ENABLER REQUIREMENTS

The key technology enabler requirements surround the access to enabling platforms, tools and technologies. Two key considerations for developers include (1) their target devices (i.e., how many consumers do you want to reach) and (2) the target development environment.

Operating Systems – open / closed

There are basically two classes of operating systems in the context of mobile: open, well documented and closed, highly-restrictive. The devices with open, well-documented APIs include operating systems provided by companies such as Symbian, Microsoft, Palm, RIM and Google. The closed, highly-restrictive operating systems include a wide range of proprietary systems that do not make their APIs available to the developer. Instead, on these types of operating systems, developers must utilize a middleware layer such as Sun's Java or Qualcomm's BREW.

These two classes of operating systems roughly correspond to what are called "smart phones" and "feature phones", respectively. While the open operating systems provided by Smartphones are highly desirable in terms of their well-documented APIs, they are currently available on phones that have a significantly smaller market share than feature phones. In the U.S., according to M:metrics, less than 5% of the consumers have Smartphones. As such, developers must have a strategy to reach both smartphones and feature phones.

Development Environments – proprietary / standard

Unlike the web, the dominant tools utilized to develop mobile services are non-standard and proprietary. They typically require an engineering background, learning brand new interfaces and APIs, and require designers to either fend for themselves (i.e., left to their own devices to integrate the design within developers applications) or use restrictive graphic design user interfaces.

If developers and designers use tools and environments used to create rich Internet applications (RIA), they are faced with highly restrictive distribution since RIA client platforms (e.g., those provided by Adobe or Microsoft) have not received sufficient distribution within mobile due to limitations related to devices and network operators.

Delivering successful Mobile 2.0 services will not be easy. It will necessitate a comprehensive platform that includes all the components required to manage the complexities of the mobile channel and integrates with existing infrastructure; a platform that manages mobile channel complexities with one-time integration with content management systems and that enables service delivery to the widest array of formats, networks and devices.

Connectivity and cross-platform integration is also vital for successful Mobile 2.0 services. Services will need to easily integrate with existing network operator infrastructure, billing systems and advertising platforms, and include support for multiple revenue generation models.

The best solutions will offer developers the ability to target a wide range of devices (i.e., achieve reach) and utilize standard web development tools and technologies to develop and deploy Mobile 2.0 services.



CONCLUSION

With Mobile 2.0 looking like a game changer you need to have the right design and technology partner to capitalize on this lucrative opportunity. Mobile services need to enable consumers to quickly access, share, and interact with relevant content in a branded, personalized user experience. They need to be delivered with a quality consistent with your brand image.

There is a huge upside to delivering the right service to capture and retain the market share you deserve. The channel is extremely complex and growing more fragmented everyday. You need a partner who is at the forefront of mobile innovation and who will help you design and deliver exciting mobile services - now and in the future.

At Nellymoser we enable media companies and network operators to establish and grow their mobile businesses. Our award-winning mobile services platform, combined with world-class mobile strategy and design, gives you everything you need to deliver extensible, Mobile 2.0 services that engage broad audiences with rich, interactive experiences.

By managing service delivery for you, Nellymoser handles all the mobile channel complexities, from integration with existing infrastructures to compatibility with the rapidly growing number of handsets. You can reach more consumers and increase retention rates with mobile services that include on-demand audio and video, interactive and community features, and user generated content.

Our current customers include AT&T, Virgin Mobile USA, MTV Networks, Warner Music Group, Microsoft, Adobe, Leapfrog, Ericsson, Vivendi Universal and Electronic Arts.

About the author

John Puterbaugh - Founder and Chief Strategist, Nellymoser John Puterbaugh, Ph.D., founder and Chief Strategist of Nellymoser, Inc. has over 15 years experience in creating and developing interactive multimedia solutions for IP networks, mobile phones and other consumer products. Before Nellymoser he was CTO of Reelworks, which provides voice technology solutions for the film and entertainment industry. He was also part of the early team and held a number of senior management positions at Voxware, Inc., one of the first companies to provide Internet voice chat and real-time streaming solutions for companies such as Disney, Microsoft, Nokia and Netscape.

He holds patents in wireless voice platforms, voice analysis and synthesis, user-generated ringtones, and in sound transformation. Educated at Princeton University, Dartmouth College and Oberlin College, he has taught courses and lectured on interdisciplinary topics related to music, computers and cognition. John is a frequent speaker at industry events including the CES, CTIA, Game Developers Conference, Digital Music Forum, 3GSM on a wide range of topics such technology roadmaps for Mobile TV, on-deck and off-deck strategies, and business models for mobile music.

