Mobile Downloadable Content – Keys to Unlocking Profits for the Industry

By JT Klepp, CEO MoConDi, Ltd.

February 2003

Abstract:

With enormous investments being sunk into 3G and all eyes on the launch of Hutchison 3G this spring, the failure of 3G uptake in Japan may leave operators to think to the present on how to make money. Downloadable content, with Java (J2ME) taking the center stage, with the promise of turning everyone from 14 to 35 into Pac Man driven addicts in our spare time, there are a number of challenges that are posed regarding business models, pricing and technical challenges in getting the right content to the right handset at a price that will drive volume usage and make money for all players. This paper examines some of these challenges, and looks at some of the premises needed for the industry to make money and for the services to be a success.

As the new year begins, the industry is looking increasingly to downloadable content to finally take off and become an important revenue source for content providers, operators and the industry in general. Although users have been able to download ringtones, logos, smart messages and other services, it was only when J2ME and BREW was introduced to handsets that true downloadable content was made possible. With the onslaught of J2ME compatible handsets to be released by the market leader Nokia in 2003, it seems like this will be the year that downloadable content finally can become mass market.

Although all parts of the industry are looking forward to the take-up off downloadable content, the industry is still plagued by lack of efficient ways for content to reach the end-user, with lack of compelling business models, cumbersome billing methods and poor management of content accounting for some of the inefficiency. Many countries are experiencing stand-offs between mobile network operators and the media/content industry – which in some countries, like for instance Norway, has led to content providers forming industry alliances to create alternative ways of billing the end-users[1]. Moreover, while downloadable content is to provide the badly needed added data revenue to the operator's Average Revenue Per User (ARPU), questions have come up arguing that the mobile operator may not be the best suited to bring such services to the end-users.

While most articles in trade journals throughout the last two years have pretty much agreed that adequate business models and a healthy business environment for all parties in the mobile services value chain will be the key to unlock profitability for the entire value chain, few countries have taken any major steps towards improving such business environments. Most articles blame the mobile network operators, but very few

---

[1] See http://www.esolutions.no/pdf/PRESSEMELDING_31.10.01-eng.pdf for more information about the alliance and the payment solution

have tried to see why the business environment has not developed further, and few markets have taken constructive measures to try and resolve the foundations for creating a better business environment for mobile content. The creation of a better business environment for the mobile services value chain will be key for a more rapid adaptation of the new services in terms of allowing all parties in the value chain to make money.

If users have bad experiences with the new services at an early stage, it will significantly slow the process of adapting services, and some may never try the services again – which has been the case with many first time WAP users. Provided the business environment is healthy, which allows for the creation of content perceived as valuable by the end-users, a rapid adaptation of downloadable services can only occur by making it extremely simple and secure for users to access and pay for this new content.

What can be done?

In order to start improving the business environment, all parties must have a mutual understanding of the value they bring to the table, and it all starts with the end-users because that is where the money is generated that has to feed the entire value chain. The industry is at an early stage, and confusions about pricing and revenue shares are many – what for instance should you price an arcade game at targeted at 14-18 year olds? Should you price it differently than a strategy game targeted towards the 18-35s? In order for the market to take off, price confusion has to be removed so that the end-users get a fair value for the product the buy. This would also mean not pricing too high, since high price levels will hinder a rapid uptake. Furthermore, the industry needs to take an active role in segmenting the content, so that users know that a higher price generally means that the content fulfills their needs better than a lower priced content piece. Due to substantial differences in the perception of value with regards to content, this article will only discuss entertainment related content, which in a mobile setting generally is intended to kill time.

Furthermore, in order for the industry to be able to split up the pie in a fair way, all parties need to understand what costs are involved, and what value each party adds to the value chain, to bring a mobile service from its originator to the end-user. When such an understanding in place, a constructive dialog about who gets what is easier to resolve. Then, ultimately it rests with the billing provider, which is usually the mobile network operator, to open up and allow for a large enough share of the pie to go down the value chain. This has not been the case in most markets, and few articles have attempted to explain why. Most likely this is due to fundamental differences in opinion about basic macroeconomic factors between the content industry and the mobile operators.

The last, but not least important hurdle is to make it ridiculously easy for the end-user to access and pay for downloadable content. With the explosion in handset functionality and features, powerful IT-systems are needed both to make sure that the right content gets delivered to the right users before any charge is made to the end-user, and also to facilitate data mining so that it will be easier to filter out the right content to the right users. Also, the content must be tested and actually work on the device intended. Poor handling of this will at best considerably slow take-up of downloadable content, while in the worst case will put downloadable content in the history books together with the (arguable) failure of WAP.

Killing time fairly

To be able to understand what fair value is, there first has to be a common understanding of value when related to entertaining downloadable content. Value in this article is defined as the benefits an end-user gets when using downloaded mobile content relative to the price paid for that content. Benefits can be the thrill of playing a racing game, the opportunity to continue an online chess game without being in front of your PC, or just the ability to pass time at the airport or bus station. The sooner that pricing reflects the benefits the user experiences when using a mobile service, the sooner the end-user will perceive that he or she are using valuable services, which in turn should allow for more rapid adaptation. The key will be in managing the users' expectations with regards to the value he or she gets from downloading mobile content.

Avoid price confusion

In order for the market to take-off at a quicker pace, pricing differentials within the entertainment content category has to be improved. The content has to be priced similarly not only within a country, and within a category of content, they also have to be priced in relation to similar content. The industry is at an early stage, and prices have been very erratic in many markets. In the middle of last year, you could log onto Motorola's Mofun portal and see J2ME games priced from $2 to $10[2]. At certain mobile portals in the UK you can see games priced at £4-6, while the same game accessible on another European portal priced at £2. The only real difference between the two was the method of billing[3]. It is clear that such pricing differentials will only serve to confuse and annoy a mobile user.

Price confusion not only reigns within the entertainment content category, but also within the same type of entertainment content. Content providers have played around with the idea of pricing the same game differently for color vs non-color phones. And does (screen) size really matter when the screen is below a certain size? Would you as a Nokia 7650 owner feel it fair to pay €1 more for the same game than a Nokia 7210 owner? Probably not.

Ambitious pricing will hurt uptake

Not only will pricing differentials contribute to slowing the pace of uptake, but too ambitious pricing levels will also hurt the uptake. Content on a PDA is not the same as content on a mobile phone, and where it may be perfectly justifiable to charge $15 for a golf game on a PDA, the pricing on a mobile should be significantly lower. The differences are in the benefits a user will experience, as a PDA provides for a much better experience in gaming, and could for instance be used as a standalone gaming machine. Phones get better and better, but will never match a PDA, if not only for the size of the screen. Mobile users will use the content most likely as a time killer, or as an opportunity to personalize their phone, and it is very likely that they will compare it to similar services, such as ringtones, voice messages etc, which are priced at very low levels. Experiences from the early downloadable content markets have also shown that

[2] Own research
[3] Comparison of certain games at Midletcentral.com and Partymob.com in October 2002. Same can be found by looking at a handful of UK targeted games sites today.

it is the low price that has enticed the rapid uptake. This will be discussed in detail in the next chapter.

Content categorization guides value perception

In order to help users, categories of content need to be established that help users find out what the better content is and if they are paying a fair price for it. Generally, the 80/20 rule will apply to downloadable content as well, where the top content generates the majority of the revenue. This means that the industry as a whole, starting with content providers, must accept that there will probably only three main categories of content:

1) Brand content: May be related to the top movie just showing, or a major sports event (eg. Disney, Sega, MTV etc);
2) Value content: Solid content, with good graphics, and (in case of games) excellent "playability" etc
3) Warehouse: All other content

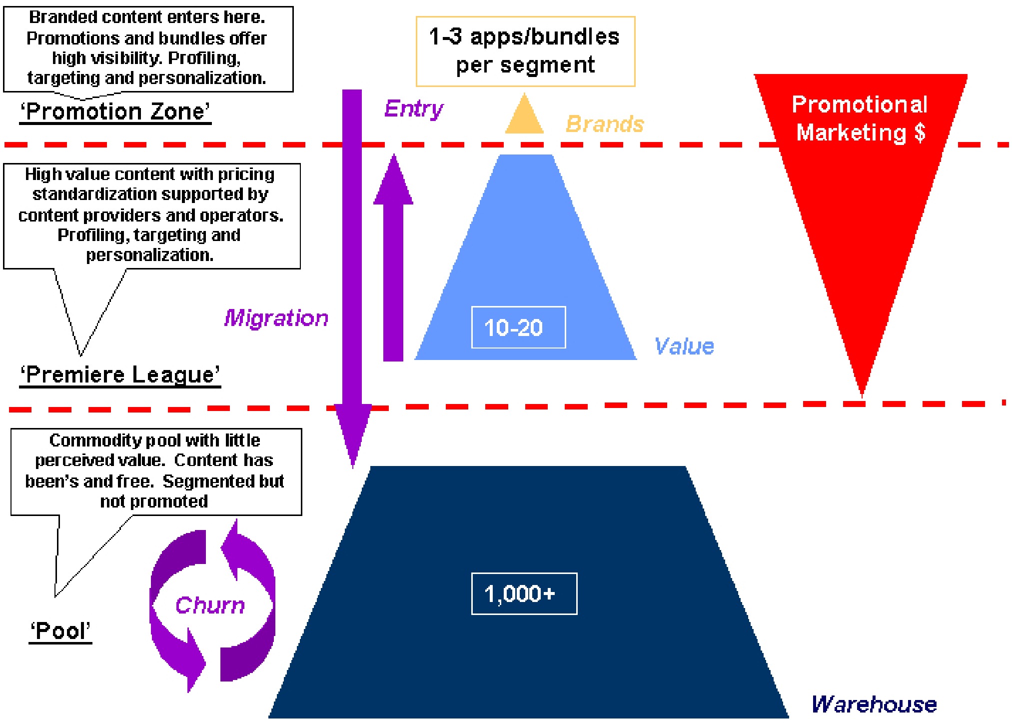


Figure 1: Content Segmentation

Most of the revenue is likely to be generated by brand and/or value content, and most of the money to promote content will likely be in the brand category. Eventually market forces will dictate this pricing, however if the value chain starts accounting for this from the start, for instance by flexible pricing contracts (which would be necessary in a revenue share driven scenario, which is the case regarding a lot of downloadable mobile content today), it allows for the Storefront that is selling the content to rapidly adjust pricing very similar to your corner vegetable store, which quickly adjusts prices for items that are old and/or not in demand. This would in turn allow for a more rapid adaptation, as pricing can quickly be adjusted to reflect a proper value for the end-user.

More money for all

It makes common sense that all parties in a value chain must be allowed to make a normal profit. The content providers feel that poor business models, currently dictated by mobile network operators, are the "single biggest obstacle to the use of mobiles as a channel for their content"[4]. The industry seems to accept with this statement that the billing relationship that mobile network operators have with the end-user is the only viable billing method. This can certainly be argued, and it will not be surprising if alternate billing methods equally as convenient as direct or SMS billing through your phone bill will surface, but for now let us assume that the road to profitability goes through the mobile network operator. Why are the mobile network operators so persistent on revenue shares, and why is the content industry so angry with the mobile network operators?

One plausible explanation is that industry players lack a clear view of the elements involved in taking a mobile service to market. An understanding is necessary before you can argue whether a percentage is too high or not, which in a new market is actually quite difficult to understand. Furthermore, current business conditions to get access to the mobile customer base causes inflated pricing, which again hurts the end-user's perception of value. The business conditions, which are presently mainly dictated by mobile network operators, contribute to slowing the market as a whole for the entire industry.

Many ways to Rome

While the focus in the media has been on charges for billing and administration, there are clearly a number of other tasks to be performed in order to take a service to the market. In any negotiation over revenue shares, all parties need to have a clear understanding of the tasks, in order to better judge who gets what share of the pie.

The specific strategies chosen by the players in the value chain will determine how a mobile service gets to market. There are certain tasks that need to be performed in order to have a complete distribution chain, which includes content creation and production, content aggregation, testing and certification, managing the delivery platform, billing and administration, reporting, hosting, marketing, etc. Few operators have neither the muscle nor the skills to perform all these tasks, therefore various markets will have various players that will do parts of the tasks:

- Application Service Providers – provide hosting facilities, and provide economies of scale advantages in operating services
- Content Distribution Platform companies – provide the technical infrastructure for provisioning the content
- Content aggregators/publishers – help operators and the likes to focus on what they should do best – pick the right content for the right users

[4] Revenue sharing, technology hinder media push (2002) Mobile Internet, Issue, May 17, p3.

- Media/marketing companies – responsible not only for marketing the services, but sometimes can provide much of the content
- Testing and certification companies – key in making sure that end-users do not get turned off at the start because the content does not work
- Third party distributors/agents – helps ASP's, publishers, content providers, and platform companies reach markets they normally would not be in
- Mobile Network Operators – provide marketing, access to customers and billing
- Retailers of pre-paid cards – provide billing method distribution, and sometimes marketing capabilities

The focus of this article is really on content and the value it brings to the end-user, and as a content owner, you really have one goal, which is to get your content distributed in as many channels as possible. Naturally there will be trade-offs to which players you work with because every relationship comes with a cost. But it also means that content providers need to be flexible in their business models and expectations for revenue share, because while you in one market may be able to pick up a phone and call the content manager at a mobile network operator, in other markets there may be a substantial number of parties involved, and you are better off with a content aggregator/publisher who will make sure that content gets pushed through to the end user via the necessary parties.

Discussions about revenue shares will unavoidably vary with the size of the market. The largest determinant of profitability for a mobile operator is the size of the customer base. Northstream identified this with regards to rolling out 3G, saying that the size of an operator will determine who will be economically successful with 3G[5]. The same principle lies also with regards to getting the new services out to the users, since the substantial investments that are needed to manage the content flow through to the end-users can be written off against a larger user base. The only cost that perhaps follows the user size is marketing, while all other costs will be subject to economies of scale.

The number of pre-paid users will also determine who gets what, as retailers generally will take 20-25% of the overall money spent on mobile services. This means that in countries with a high number of pre-paid users as data customers will lead to less money to be distributed to the mobile value chain players.

Perhaps one of the largest determinants of success for downloadable content will be the marketing of the services. With new capabilities comes the need to educate the consumer, and also target the right consumer with the right content. Marketing is expensive, and few small companies can afford to have print ads running in major newspapers for longer periods of time. This is perhaps why you see companies like Scandinavian media giant Schibsted, becoming the largest mobile portal in the region through their portal Inpoc, because they are able to take advantage of their substantial media assets when marketing their services.

The amount of money being spent then, will certainly impact the overall cost of getting mobile services to the market, and has to be considered in any revenue share negotiation.

---

[5] Northstream (2001) 3G business case – bid book vs. reality, Northstream, February.

Mismatch between business model and needed pricing level

A more rapid adaptation is contingent on that the perceived value of downloadable mobile content is high. A mobile user will unavoidably be a victim of the reference price expectation as explained by authors Nagle and Reed in "The Strategy and Tactics of Pricing"[6]. This means that they will compare the price of a downloadable game, to other mobile services, like ringtones, logos and premium SMS. Currently such services are sold for €1-4 in most markets.

Also, content providers and the industry must consider the expenditure effect of pricing, which by authors Nagle and Reed is defined as "buyers are more sensitive when the expenditure is larger, either in dollar terms or as a percentage of household income." What is relevant here is not household income but the budget each user has for mobile services (ARPU). When considering that a large share of entertainment related content is consumed by cost sensitive pre-paid users, the industry is well advised to work towards a low pricing level on downloadable mobile services, despite expectations of an increased ARPU.

A low pricing level will be key to unlock a rapid uptake, and thus a large volume of downloads. To allow for a low pricing level, there has to be attractive revenue models for the value chain players so that the revenue per download is large enough for them to make a good ROI. Why then are so many operators persistent on charging high amounts for access to their customers, when clearly it is not in the interest for the industry as a whole?

It's all in the Numbers

Let's say you are thinking of starting a mobile portal. These are some of the issues you need to consider when making a your financial projections, based on a hypothetical example:

Total market:	5m
Current % of users w/downloadable handsets:	10%
% of new handsets w/download capabilities:	50%*
Replacement rate:	30%*
% users w/handsets that use download services:	10%
Downloads per active user/month:	1
= Downloads per month/year 1	50k

* Replacement rate and new handset with download capabilities will affect future user base. This example looks at year 1.

If the end user price is €3, you are left with app. €2.50 before tax, and in perhaps as much as 50% will go for billing cost if you use premium SMS in many countries today, which leaves you with €1.25 per download and a total revenue per month of €62.5k

If you are to employ a CEO, a marketing responsible, a web master, a support person and 2 system engineers, all at an annual salary of €50k, your monthly wage expense (with 20% social costs) will be €30k. Then of course, you will need to pay for the content, which could be a third of net revenue (or more). All in all you are left with app €10k per month. This will need to cover your hardware, hosting, office expenses AND marketing expenses.

Feeling like going for it? Of course, no technical issues have been mentioned here…

One plausible explanation is that simply the operators disagree with rest of the value chain with regards to the slope of the demand curve. Figure 2 tries to illustrate this dilemma:

[6] Nagle K. and Reed. R. (1999) Strategy and Tactics of Pricing, Edition, Publisher.

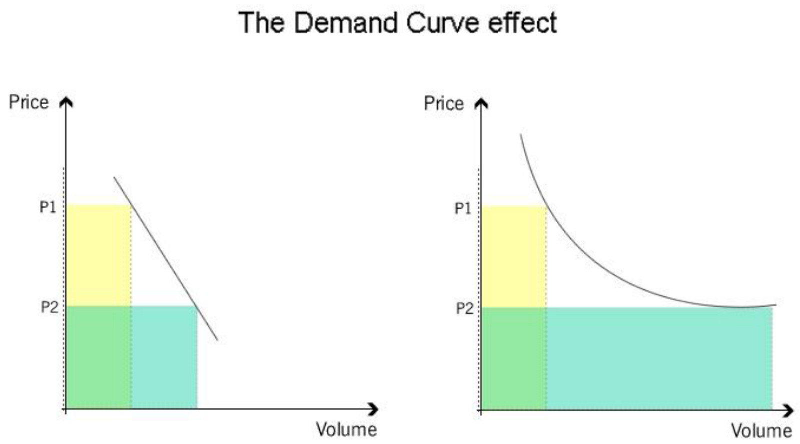


Figure 2: Perceptions of the demand curve

If the operators believe that the curve on the left is the truth, then they will fight hard for their share of revenue, because they think the pie will not increase much through price reductions. However, if they believe that the curve on the right is the truth, they will want a low pricing level, and will by default have to lower their portion of the revenue share, otherwise there will simply not be money left for the players in the value chain to create and deliver content to the end-users.

Experiences from Japan and Korea, as well as with ring tone and logo market indicate that the curve to the right is probably closer to the truth. Furthermore, in a report to the EU, the late Andersen proved that a reduction in VAT (which easily could be a reduction in billing charges) when passed on to the end users, would benefit the operator more in the long term, than if this saving would be kept by the operator[7]. The industry as a whole benefits substantially more by being able to price at lower levels due to increase in volume.

Dividing the pie

Any discussion regarding how to divide the pie must consider all the elements of cost, and what value each party brings to the table. If all an operator is to do is to provide billing, then clearly the percentage they charge for this should be low.

As a benchmark, you can look to Norwegian operators. Both NetCom and Telenor have very transparent billing models, and have harmonized the way they charge for “access” to their customers. The percentage is dependent on the price to the end-user, but a rough average is about 31% of the price, net of VAT[8]. The percentage of pre-paid users in Norway using data services is fairly high, but still the operators according to Telenor “…more than cover cost” and “have quite a healthy business”[9].

---

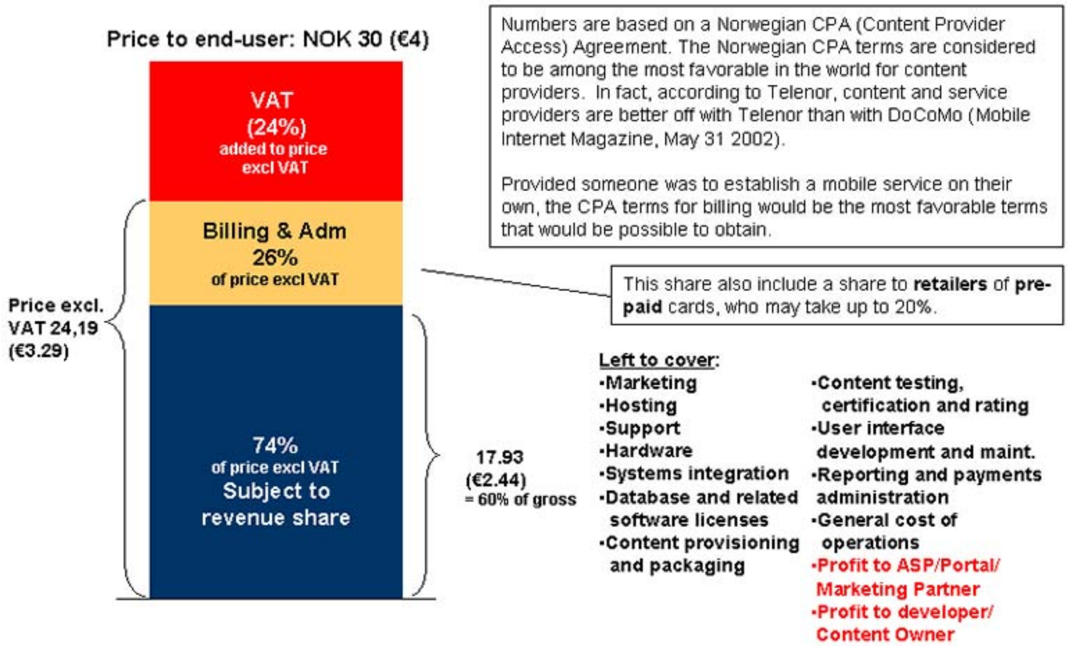
[7] Andersen (2002) Digital Content for Global Mobile Services, Report to European Commission, Directorate-General Information Society.

[8] See http://cpa.telenor.no and http://cpa.netcom.no. Average percentage includes SMS delivery charges.

[9] Service providers cry for a higher share of low-cost premium SMS revs (2002), Mobile Internet, May 31.

If you believe then, in the principle of economies of scale, there is absolutely no reason for any larger European operators to charge more than this for billing. Yet, in most European countries, billing costs will range from 35-50% when using SMS.

As mentioned before, Europe is also hampered with VAT on mobile services, which Andersen proved can be a hindrance to the uptake of mobile services in general. The relevant "pie" to discuss then, is really the cost after VAT and billing:



Note: Example does not account for SMS delivery charges

Figure 3: Splitting up the revenue

In certain markets, the share number of parties involved in bringing services to the market leads to that the percentages times the net revenue available for distribution (blue area in the figure) simply is not large enough if you are to follow the pricing logic as discussed earlier. Therefore the only natural choice is to raise the price, which will lead to a poor value perception among users and thus a low uptake. The hypothetical example "It's all in the numbers" explains better the predicament many mobile players may face in trying to get services to the market.

With the high costs for billing the end-users today, mobile network operators had better watch out before the market gets away from them. All economic theory suggests that artificially high pricing will attract new entrants. Already you hear about retailers wanting to sell mobile games, and special mobile services pre-paid cards and other payment options are rapidly becoming an alternative, which deprives operators of much needed service revenue to increase their ARPU.

Increase the pie before arguing about how to slice it

It is clear that various markets have various strategies, and the size of the user base and ability to do effective marketing will have a strong impact on the profitability of the parties taking the services to the market. However, the goal for everyone should be to have a common understanding of how to increase the pie, before arguing about how to slice it. All parties want rapid adaptation of the new services, but to achieve this, all parties need to understand that a low pricing level is what will drive up the total profitability for the industry as a whole. Currently, high billing charges do not allow for a low pricing level, resulting in stand-offs in the industry. Most likely, such stand-offs are due to differences in opinion on simple microeconomic factors such as the slope of the demand curve. The mobile networks operators' persistence in maintaining a high price to access their customers will generally lead to higher priced applications and services, as value chain players justify their investments in bringing the services to the market. This will in turn hurt the industry as a whole, as the perceived value of downloadable services go down.

Keeping it simple

Few will argue against the fact that in order for downloadable content to be a success, accessing and paying for the content has to be made absolutely dead simple for the user. Most mobile services today are either sold through the web or through advertisements in the media, and most service providers have recognized that, perhaps unfortunately for the industry, being able to also pay with your mobile is a requirement.

However, those issues are only those that the user will see on the surface. In order to avoid getting "WAPped", you need to make sure that the right content gets delivered to the right handset, and make sure it actually is delivered to that handset before charging. Nothing will annoy a user more than paying for a service that does not perform as expected.

Furthermore, with a plethora of new content providers developing for a very complex environment of handset capabilities, assurance is needed to make sure that content actually works before it is even attempted to be delivered to the end user.

Lastly, any success in entertainment related content is related to how well the message is communicated to the user. Marketing will be the key enabler given that everything else is taken care of.

And you thought Windows was a pain

The wireless industry is all about standards, and in general is well in tune with how important standards are for the development of a technically complex market. The fact of the matter though, is that there is not one standard that prevails with regards to handsets, such as in the videotape market or in certain respects the PC market (sorry Mac users). Most likely, we will be faced with multiple operating systems (Symbian, Palm OS, Microsoft Stinger) and multiple execution environments (J2ME, BREW, C++). Add to the fact that in a handset, screen size gets that much more important than a PC, and capabilities between phones with regards to functionality, battery life, memory etc varies quite a bit more than on a PC, you have a scenario that is a headache for content producers and developers, and a potential nightmare for tech avoiding end-users.

To avoid asking every user to get a four-year engineering degree, powerful systems are needed to recognize handsets, know their functionality and pick the right content, so that all a user needs to know is that "I own a Nokia". Systems such as Curator from Digimob (www.digimob.com) are among the world leaders in this space, and anyone wanting to offer downloadable services need to consider how content is provisioned to the end-user to avoid killing the services at the start.

Content must be tested before distributed

My company, MoConDi (www.mocondi.com), works very closely with developers of mobile software. I cannot avoid feeling their frustration when their release of their latest game has been delayed yet again, because version change number umpteen of the phone's operating system has yet been subject to a change that requires adjustment to the code.

So, if you have the world's best system to sort, track and deliver your content, you also need to make sure that the content you have actually works on the device it is intended for. This usually means subjecting the content to a certification and testing program so that you are absolutely sure that the user will not be left with unrecognizable error message, which in a worst-case scenario will render them unable to use their telephone.

PDA users, and also in general PC users are most likely a lot more technology savvy than your average mobile phone users. Therefore, they are likely to be a lot more forgiving of errors – in the mobile scene you will not get many second chances to prove yourself.

Getting the message through

Marketing, as was recognized earlier, can be an expensive proposition if not used carefully. As in any new market, there is a need to educate the user. Furthermore, it is also a matter of marketing to the right user groups, and bundling the content in a coherent package that hits the interest of those groups. More and more do we see integrated campaigns, that not only offers you discount tickets to a movie, but also a CD, a ringtone and a Java game for your phone.

One can question that a mobile network operator is to be among the most successful in marketing mobile services, since many of the new download services go way past communication, rather they are targeted at your lifestyle. They do sit on powerful data in terms of knowing who buys what handsets, as choice of handset often is a very conscious choice. However, they (or whoever is selling mobile services) also need to start tracking the usage of mobile services, so that they know which customers prefer what kind of content. The 80/20 rule certainly applies in the mobile content area as well, and knowing what's hot or not at the moment will be crucial.

In short…

With all these market factors having to come into place to allow for a rapid take-up of downloadable mobile services, without having barely touched on the technical issues, does this mean that this is virtually hopeless? Certainly not, but it means that players in the value chain need to take an active role in helping to resolve these issues. While the focus has very much been on the unfavorable business models offered by many mobile operators, this article has shown that there are numerous other factors that come into play in order to make mobile downloadable content a success, which the industry players collectively need to address.

Taking an active role does not necessarily involve trying to change standards, or establishing industry organizations to promote better revenue sharing models. My company for instance, MoConDi (www.mocondi.com), is taking an active role in assisting the market take-up. We offer a powerful system for provisioning of content, through easy uploading and management for content providers, payment flow administration and billing interfaces, user-friendly presentation layers, data mining and reporting and more. Furthermore, we work with external partners to certify and test content, and we carry an active dialog with both our content partners and distribution partners to promote a common standard to pricing of the content.

Each company in the value chain can contribute significantly by raising their level of awareness, and focus on the real issues that allow for content to be easily accessed and paid for by the user, and that such content is perceived as valuable to the user. In the end, it is the effort from the industry participants that will determine whether the market can reach an equilibrium where volumes are high and participants make money, or if the market will remain a niche market, not dissimilar to the market for WAP services, due to technical and economical barriers in reaching the users.

The goal must be to maximize the value perception that users of mobile downloadable content get through buying and using the services, through correctly pricing the services and segmenting the content. Business models need to be improved through better understanding of how a service gets to market, and a better understanding of what contributes to high volume and rapid adaptation among users, which also allows for all parties to make money. If this can be done, and steps are taken to make it extraordinarily simple for the user to access and pay for the services, the industry will maximize the value not only for the users, but also for the industry as a whole.

About the Author

Jan Tore Klepp is the CEO and co-founder of MoConDi, a company that provides a fully managed storefront solution for the distribution of mobile content. Previously he was Director of Business Development for The Mobile Media Company, where he was involved in strategic alliances and product development of the company, which focuses on provisioning systems for content, and wireless streaming multimedia platforms. He has experience from Ernst & Young Corporate Finance, working on valuations and fund raising for Internet start-ups. Moreover, he has been involved in systems development with Andersen Consulting, now Accenture. Mr. Klepp holds an MBA from the Haas School of Business at the University of California at Berkeley. He is also a graduate with a Bachelor of Business Administration from Texas A&M University. Mr. Klepp has written several articles on value creation in the digital economy published in various trade journals.