June 2006: Mobile Is Busting Out All Over

A Concept Paper for
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"Most of them arrive with the cell phone, it gets turned off, it goes into their backpack, gets stored in their locker for the day, and doesn't come out again till 3:00," said M.S. 51 Parent-Teacher Association President Kim Maier.

But [New York City] Mayor Michael Bloomberg says he is sticking by the cell phone ban.

"You can't use cell phones in schools, you can't use iPods. Why can't you get the message? They're just not appropriate," he says.[i]

SUMMARY: The overall intent of this series of papers is to inform the reader on the mobile[1] phones in their potential role as a delivery platform for Open Educational Resources ["OER"]. This paper in the series paper sketches a time of rapid transition. June 2006 feels very much to me like the tipping point that will begin a major emergence of mobile learning.

> Kids in the most developed countries are close to mobile phone saturation.
> Kids in the least developed countries are rapidly acquiring mobile phones.
> Mobile phone technology is evolving and erupting.
> Broadband is arriving to greatly enhance the quality and variety of mobile content media delivery.

Meanwhile, education is in the throes of confusion that barely looks at the mobile learning subject at all. Some examples of this situation are set out below. I think it is unlikely that the digital natives who are now the majority in pre-K-12 will be separated from their mobile phones. As I say in the conclusion below, my guess is that over the next few months the confusion/conflict described in this paper will be worked through to an acceptance at schools of the phones.

If I am right, with mobiles busting out all over in June 2006, the coming weeks are a wonderful opportunity to support OER seed projects that will germinate mobile learning as the devices soon become ubiquitous among students both in and out of school and across global education.

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[1] The terms *cell* phone and *mobile* phone essentially mean the same thing: a telephone that connects without wires. *Cell* is more commonly used in the United States and *mobile* elsewhere. Because *mobile* is more meaningful as a word — implying the phone is portable — throughout this report the devices are called *mobile* phones.

AWARENESS OF CHANGE

Mobile seems is roaring toward us down a lot a pipes. But it is fair to say the mobile age has not yet fully arrived. Before being too hard on educators and politicians (as I may seem below) for their lack of positive appreciation of mobile phone, it is useful to temper that with how far off the edgy profession of marketing seems to be on the same subject.

On June 9 I attended the 2006 Innovative Marketing Forum sponsored by and held at Columbia Business School. I was surprised as the panels rolled by that only one speaker represented mobile marketing and she was asked no questions. The speakers were mostly 20-30ish aged marketing pros, one-by-one talking about the day's subject: innovation. Finally on an afternoon panel a middle-aged fellow who obviously commanded the respect of the audience included mobile in a list of future factors that he rattled off in his talk. He mentioned mobile but said nothing more about it, so in the Q&A I asked him to elaborate. His brief response was only that mobile is the most important change that lies ahead, with no explanation or predictions. Those who paid the large fee to attend the conference did not get their money's worth on the mobile innovation topic.

Students already have the mobile devices and they are insistent on bringing them to school. Educators need to get the conversation underway as to how mobiles can serve learning.

MOBILE PHONE TECHNOLOGY IS BLOSSOMING

The mobile phone is expanding and developing in major ways in multiple directions. This is not the place to describe in detail the technical developments, even if I could. But in my effort to have a general insight into what is happening, I have become active with these two groups:

> The Carnival of the Mobilists, where I will be the weekly host for the third time on July 28[th.] Looking at some of the Carnivals[ii] is a way to get a sense of the energy and activities in the mobile field.
>
> Oxford University Next Generation Mobile Applications Panel, which is a group of 700+ tech and marketing mobilists from many countries. The panel is a forum with many ongoing themes. It is not open online.

The experience of being part of these groups has taught me that much is being accomplished by many very bright people.

In another mobile exploration, in May I wrote to Rotan Hanrahan who chairs the W3C Device Description Working Group that is part of the W3C Mobile Web Initiative. He invited me to post publicly for his group my thoughts on the importance of mobile open access and function for learning. After a couple of exchanges, Hanrahan sent me the

comments included here as *Exhibit 1 – W3C.* His message includes these words, which are directed to, among others, the OER community:

> All of these people understand that to extend the reach of the Web and ensure that the benefits can be shared regardless of the capabilities or limitations of the devices, it will be necessary to have reliable device information. It is therefore fitting that there are messages on this list from potential user communities (e.g. students of the world) who will benefit directly from a successfully implemented DDR. It is for these people that we put in the effort.
>
> In return, I would ask the representatives of these communities to let their colleagues know that the challenge of device diversity is not being ignored, and that we value your public support.

Finally, on the tech topic, the devices that are busting out all over in June 2006 increasingly have "everything," to use the comment from my fourteen-year-old neighbor. When I talked with her about mobile use, I mentioned that the devices could potentially be used by students for studying. She jumped in to say that it is already possible to do that on Sidekick phones. She got excited thinking about the phone and said, "it has everything; I've asked for one for my birthday."

I responded that I knew there was a version II, but Sidekick III? She explained that the word is that the III will be released in July. I later did some checking on the Internet and found out that the appearance of the Sidekick III has been a matter of fervent anticipation since at least last fall. In contrast to the little interest shown by the marketing folk at the Columbia Business School conference described above, the T-Mobile/Hiptop marketers who promote Sidekick mobiles have succeeded in making the devices very hot among their market of young buyers. As I write this in mid-June 2006, the home site for Hiptop[iii] (who manufacturers Sidekick) proclaims: "There is no Sidekick 3 (Hiptop 3). The pictures you have seen are merely prototypes for a remote control for your cat. . . ." Linked to this page of denial is a webpage about a June 20 launch party for Sidekick III to be attended by a long list of celebrities:

MOBILE FEATURES ARE ALL OVER THE PLACE

What would be important mobile phone features that were not discussed at the Columbia meeting and are not part of the school discussion described below from the world's largest school system in New York City? Compelling mobile features are not something in the future: they are already all over the place. Briefly, here are six examples:

American Idol. Over 63,000,000 times mobile phones sent the votes through the digital networks to select the new American Idol. Text messaging is an interactive written medium through which about 2 billion people on earth are potentially connected because they each have a mobile phone. This network is in place and it works. Just ask Taylor Hicks.

Pornography. When I first mentioned the potential of mobile phones for OER delivery, in a meeting with Hewlett attenders in Utah last September, I pointed out that porn had checked out the mobile medium and "found it worthy." Why then cannot education deliver learning content through the mobile medium? It can.

Exhibit 2 - Porn is an article from the online pornography news source Xbiz.[iv] I recommend reading the entire article in this mind-set: assume the topic is OER instead of porn. In the following excerpt I have made the switch to OER:

> On a personal level, one of the first things I did after purchasing both my Windows Mobile-powered cellphone and Sony PSP was to load OER onto them. . . . I was curious as to the type of OER "experience" that these devices actually offered.
>
> While my cellphone's relatively tiny screen (about the size of the Video iPod's) was quite adequate for the task, the PSP's gorgeous widescreen display is simply stunning, offering sharp images and crisp video. The built-in Wi-Fi capability and internal web browser also make this an excellent platform for mobile web browsing, with my only complaint being a lack of "video out" capability, which would allow it to use a television set as a display.

Much of what the author says throughout his article confirms that the delivery of content is effective and getting to be more so on mobile: the medium has proven worthy.

Gambling. The emergence of wagering on mobile phones provides another proof laboratory of learning materials. While porn is mainly graphical, gambling is interactive and dynamic — as would be many kinds of learning activities on the small computers. The following is an assessment by Juniper Research from its June 2006 white paper: Gambling on Mobile – Third Edition[v]

> Juniper Research believes that in the long term the mobile gambling market will develop in a different way to the online gambling market. Initial development in some market sectors is likely to be as an additional channel for existing gamblers, but in the longer term the market will attract significant number of new users as the inherent advantages of the mobile channel become more apparent and as mobile gambling and other forms of games develop into mass market applications. This two phase development will be reinforced by existing online gambling service suppliers moving into the mobile space.

World Cup 06. The soccer matches are celebrated in many ways throughout the Internet — including by mobile phone features like the one illustrated here.[vi] In the increasing rollout of sports mobile content, the ability of the phone owners to interact grows and gets more interesting. Again, ideas are being tested in sports content that seem very simple to apply in learning.

MySpace. June 2006's hottest Net space for kids is moving into mobile in a big way. Here is one of their online pitches:[vii]

> *Come try MySpace Mobile on Helio!*
> Thanks to some really smart people, we've figured out a way to cram everything you've come to love about MySpace onto our devices - and not in a way that feels cramped or contrived, but a natural extension of the MySpace experience. We can read and write MySpace mail, bulletins, blogs, view profiles and add friends. But that's the usual desktop stuff- now you can upload pictures from your Helio device to your MySpace profile in real time.

YouTube. This fast-growing video website has technology that tantilizes learning futurists who can imagine putting these moves into mobile learning — say for science field trips or creating artistic projects:

> You can now upload videos directly from your phone or PDA to YouTube. All you need is a mobile device that can take video and send MMS messages, and an Internet access or data plan from your service provider. We currently support uploads from Cingular, Sprint, T-Mobile, and Verizon.
>
> To get started, click on "Create Mobile Profile." Login, or create an account if you don't already have one. Once you're logged in, you'll create a mobile profile to set up the default information for your videos, and then our system will generate the email address where you should send them. This address will be unique to you and your profile, and you can have up to two profiles.[viii]

JUNE 06: MOBILE LEARNING DUST-UPS BUSTING OUT WITH KIDS

It is my theme in this report to propose to the reader that mobile phones can and will soon become a major delivery platform for OER — and that the tipping point is here toward the emergence of mobile learning. I think these things are true because:

> • Content delivery of other types is working well.
> • The phones are getting smarter and more featured.
> • The student generation in both developed and less developed countries
> have or are getting the mobile phones.

In the discussion that follows, the focus is on pre-K-12 in the USA and UK. In later reports I will cover college-level students and the global picture. The schools populations described below are learning in very changing times. Much of what follows in anecdotal rather than analytical, which I hope will be helpful in understanding these very interesting and important issues.

A lot is being written and said these days about of kids and their mobile[ix] phones. The subject is a sub-theme of the "digital natives" observation that the newest generation was born into and is growing up in the digital age. In 2006, the opportunity the mobile phone presents to the learning process may be huge. We have reached a point where nearly everyone who is school age has a mobile phone and the phones are getting significantly smarter with each new model release. Mobile phones are being carried into the education place in the pockets students at an increasing rate that promises saturation soon. Nonetheless, there are issues.

A New York City public schools onsite report: diametrically opposite views.

On June 14, 2006 I was one of a team of four visiting a New York City middle school to judge a Project Citizen competition. We heard two teams of seventh graders present their

projects aimed at changing public policy. The second team's project advocated the end of random scanner searches at schools.

The presentation opposing the scanners began with a skit in which five of the kids played the role of students and one was a security man. The team had created a walk-through cardboard frame and a hand scanner of the same material. One-by-one the kids playing students walked through the frame, encountered the security man who then passed his hand scanner up and down their bodies, located a cell phone and took it from the student. The students losing their phones acted disgusted but did not resist.

In the part of the presentation following the skit, although the notion of using their phones to learn never came up, the team argued passionately for permission to keep their phones and against the claim of the largest school district on earth of its right to take their phones away. It seemed odd to hear these

Gotham Gazette
New York City News and Policy

Cell Phone Ban Angers Students

by Ilya Arbit and David Schmutzer
May, 2006

On April 26, New York City police officers set up mobile security scanners at the Acorn High School for Social Justice in Brooklyn. They seized 129 cell phones, 10 CD players, two iPods, a box cutter and a knife. Such searches and the ban on cell phones have prompted protests by high school students across the city.

Cell phones have long been banned in the city's public schools, but principals at schools without metal detectors, such as ACORN High School, often ignored the policy, and students got away with carrying cell phones, as long as the phones did not make noise in class.

Now all students have to obey the rules because of a new Department of Education security policy. City police officers have started randomly showing up at schools that don't have metal detectors and using mobile scanners to keep weapons out of the schools, according to a department press release. But the police are also confiscating cell phones, iPods and other banned electronic devices. If cell phones are seized during a scan at school, school officials decide when to return the phones.

youngsters listing in the same breath these prohibited items that security personnel took from students: "box cutters, guns, knives, electronics, cell phones." As is mentioned in *Exhibit 3 - NYT*, "According to the city, the authorities have confiscated 36 weapons, mostly knives, since scanning started — and 3,027 cellphones."

It was a coincidence that I happened to be researching mobile phones and the Project Citizen panel I was chosen to judge happened to be arguing for allowing the phones in school. Compounding the coincidence, a New York City Council hearing was to be held on the same subject the evening of the day I did the judging. At that hearing, *as Exhibit 3 - NYT* reports:

> Administrative officials, backed by a panel of three principals, defended the ban, saying that students have used phones to cheat on exams, summon friends for fights, take illicit locker-room photographs of classmates and disrupt class.

> "The reality is that if cellphones are allowed in our schools, they will be used, and they will be used inappropriately," said Deputy Mayor Dennis M. Walcott.

The middle school where I was judging is in the borough of Queens. The two classes of seventh graders gathered in the library for the event were a mixture of many national and ethnic backgrounds. The kids were polite, well-spoken and appeared to be academically competent with a few star students in the mix. Their arguments for opposing the cell phone ban were that the ban infringed their rights and the phones have become an important safety factor for children. I think what they really cared about was their rights.

One of the other judges on the panel was what I would without hesitation call a master teacher. She taught for 34 years in a large Brooklyn High School where her students routinely achieved in the top tiers and consistently won many awards over the years. She challenged the kids we were judging with the idea that Deputy Mayor Walcott used to draw a line in the sand. Like the Deputy Mayor, she said the phones interfere with education.

One of the girls on the team came right back at this judge, disagreeing. After a couple of exchanges between the young girl and veteran teacher, the teacher said, "Which would you choose, your phone or education?"

The girl looked startled and then answered from her heart, I believe, when she said, "My phone."

The judges and the kids were all a bit taken aback, and the subject was changed.

Mobile phones under the radar

After writing about my experiences in the middle school in Queens, I discussed the phone situation in school with my fourteen-year-old neighbor (who covets the Sidekick III). She attends LaGuardia High School, which teaches the arts and was the subject of the movie *Fame*. It is among the most well-regarded public high schools in New York City and is known for its outstanding student body.

My friend's take on mobile phones in school was much more relaxed than that of the middle school advocates whom I had heard earlier in the week. My high school student friend started by saying her mother will not let her leave home without her phone. She explained that the public school scanners had not yet visited La Guardia, so there had been no dust-up.

She said kids bring their phones into the school and turn them off while they are there, or leave them on vibrate. Teachers are required to take the mobiles away from a student if they see it, which does not happen often. That rule changed recently, she said, to requiring teachers to take the phones if they hear them. I asked if kids used their phones surreptitiously during class. She said some of them did when the class was boring.

The bottom line was that the students have mobile phones and, as I have heard and read elsewhere as well, when there is not a behavior problem the kids keep the phones. It was clear that the honor student with whom I was talking considered the problem of keeping

her phone was solved by her being careful to obey informal rules that are in conflict with official rules. She stiffened, though, when I suggested there could be any reason for her not to keep her phone. I asked her about that and she said all the kids felt that way.

Why do the kids care so strongly?

To answer the question about why they care, it is first noteworthy that these questions pertain almost exclusively to pre-K-12. The post-high school attitude in education toward individual student computers is very different from that of lower grades. College students are mobilized with laptops, mobile phones, iPods and more — a reality that has crossed the threshold into routine.

There is a factor for the pre-K-12 that I believe has greatly—and negatively—influenced learning in the digital age and is little recognized. It is a factor that the mobile phones are bringing to a head. It resonates with the project coming out of MIT to provide One-Laptop-Per-Child. That factor is seeing to it that each student has his or her own device for connecting to and working with the Internet. This is my opinion on the shared computers at schools from my book *109 Ideas for Virtual Learning*:

> [In the 1980s forward,] if the education establishment had heartily embraced computers—as the law and business establishments, for example did—things would have been done differently. In law firms and businesses, and many other fields, the desktop computer was a personal computer. If was shared, individuals had personal sectors protected by their passwords. A person's computer quickly became his tool for many tasks. He used it to do his job, as his filing cabinet, for email, and before long it became an extension of its owner's memory.
>
> Not so for students when they are at school. For the tasks their parents do on a computer at work, kids at school remain even today primarily in the pencil and paper world and continued to carry their extended memory scribbled in notebooks and their files on their backs. Perhaps this is part of the reason they have taken to sending text messages on their cell phones.
>
> It seems odd that the kids got such second shrift. There was endless talk about the millions of dollars needed to wire the schools, and then billions were raised and spent. But no crusade emerged to supply students with personal computers. There is still a habit in action of businesses and corporations donating their old computers to schools when they upgrade their employees' machines. Hand-me-down technology is a handicap in talking advantage of the virtual knowledge ecology.[x]

The mobile phone has leap-frogged kids out of their personal device deprivation as they are reveling in their mobile phones. As a reality check for this point in my own thinking, I looked around the middle school library where I was judging the students. It was a very large space in which I would guess about 80 seventh graders were seated at library tables and on the floor watching the panel presentations. Also here and there around the room

were desktop computers that are used by students when they come to the library. I could not resist checking my theory. When I got a chance, I asked the entire gathering of seventh-graders if they ever got the opportunity to have and use their own computer at school. There was a unanimous chorus of groaning "no's."

A week earlier, I had gotten a report on the same subject about students on the other side of the world. The keynote speaker at the Columbia Business School conference I attended was Deepak Advani, the chief marketing officer of Lenovo. He had been vice president of marketing at IBM's Personal Computing Division when the Chinese company Lenovo took them in. Advani described a feature that Levono had created in the computers it made for schools. A student could push a button on her shared PC to restore the machine to where it had been when she was last working on it. Advani said the students really did like being able to get back to their own work and files.

It is fascinating to ponder why the "wire the schools" movement of the 1990s did not wire the students individually. A strong case could be made that learning was held back into 20th century analog insufficiencies by the failure to equip students at school with a single computer as was done for their parents in the workplace. On the other side of the matter, there are the arguments—and these have pretty much won the issue—that students cannot be trusted with their own machines either to be safe online or to be honest in their work.

My prediction is that the mobile phone and other handheld devices are about to equip individual students with computers that will be their primary learning tools. Very soon instead of having wired schools, we will have wireless students. It always saves a lot of hostility and energy when a dispute is settled by becoming moot. That seems to be happening in the placement of his or her computer into the hands of each student. Right now most of them already have them concealed in their pockets.

CULTIVATING THE MOBILE LEARNING FUTURE

British blogger Steve Jones chose what I wrote below for the Carnival of the Mobilists as the "post of the week." He commented about what I said,[xi] "This week my daughter, Clare started her GCSE exams and the usual rule of having to leave their phone in the lockers is being even more strictly enforced during this exam period. Every school administrator should read Judy's thoughts, especially her challenge, "...Why not make the #1 tech goal for educators to take advantage of the mobile phones students have in their pockets". He was referring to this post[xii] on my blog GoldenSwamp.com on May 8, 2006:

Here's the quote a NetDay survey published this week in eSchool News:

"When asked what obstacles were standing in the way of students' tech use at school, the No. 1 response of students was institutional rules prohibiting cell-phone use, IM, eMail, or other forms of communication."

The survey says that while adults — teachers, administrators and parents — use email to communicate, students prefer instant messaging, especially among themselves. NetDay ceo Julie Evans says, "IM is more valuable to them because it is instant, and they can speak with multiple people at the same time. I believe that this highlights a greater sophistication in student tech use–and a trend for us to watch."

Yet, as eSchool News comments, "The policies of many school systems appear to conflict with this trend, instead of talking advantage of it."

Why not make the #1 tech goal for educators to take advantage of the mobile phones students have in their pockets:

> Devise IM subject conferencing as lessons.
> Use the phone cameras to capture images for science and art.
> Interface Internet resources on the smart phones.
> Create a classroom demand for learning games to challenge the gaming industry to produce them.
> Collaborate through conferencing with distant students.

Integrating mobiles into education will sideline the weird trend the eSchool News story conjures toward the communication among educators by the email medium while the kids are interacting through IM. Adults need to catch up and to lead in education communication. Achieving that goal, summons us to integrate the students' mobile phones into the learning process.

Text mentoring sprouts in Buckinghamshire

On June 11, 2006, the BBC carried the picture here and the news that in Cottesloe school in Buckinghamshire UK, eleventh grade students are text messaging to and from their school and teachers to get help in their studies. The article from the BBC in *Exhibit 4 - BBC* gives details.

This small project is a useful example that other school could replicate. Hopefully, it will.

A TIME FOR PLANTING SEED PROJECTS

Although pre-K-12 education appears to be in the throes of a mobile phone confusion that barely looks at the mobile learning subject at all, real opportunity may be at hand. I think it is unlikely that the digital natives who are now the majority in pre-K-12 will be separated from their mobile phones. My guess is that over the next few months the confusion/conflict described in this paper will be worked through to an acceptance at schools of the phones.

If I am right, with mobiles busting out all over in June 2006, the coming weeks are a wonderful opportunity to support OER seed projects that will germinate as the mobile devices quickly become ubiquitous among students across global education. The text mentoring that has popped up in Buckinghamshire UK is just such a project.

Exhibit 1 - W3C

Email of May 5, 2006 from Rotan Hanrahan
W3C Device Description Working Group
[Files of Judy Breck]

For the sake of avoiding the kind of loop that the BPWG experienced in past debates, let us concentrate on how this issue relates to the work of the DDWG.

Ms Breck notes that there are many people using a diverse set of mobile devices to access educational material on the Web. Unfortunately, much of the material they may wish to access is not available to them because it is incompatible with their device's capabilities.

The suggestion that the authors of existing material would recreate their material to suit this diverse community is interesting, but often impractical for a number of reasons:
- The authors may not have the resources (finance, time, etc.) to undertake the effort.
- The authors may no longer exist (people move on, people fade away).
- Alternative representaions of the content may not be available or appropriate.

Even if the authors decided to recreate their content for one set of limited devices, there will be other sets of limited devices that will continue to be incompatible with the content.

Adaptation is a potential approach. It can be applied in a variety of ways including:
- The original authors recreate their content in an adaptable format.
- A third-party provides a proxy that "scrapes" pieces from the original content and delivers it via an adaptation solution.

Scraping is a technique that requires heuristics/rules to determine the pieces of the content to be extracted, and then reformats these pieces into new content. In the absence of the original author, the process will have to "guess" the intention of the author (i.e. why certain pieces are in certain places). Sometimes it gets this right, more times it gets it wrong.

Regardless of how you obtain the pieces of content, there is always one essential step in the solution: ensuring that what you deliver to the end-user will work on the end-user's device.

It is this particular step that the DDR hopes to address. Without it, all of the other processes will be prevented from making the Web accessible to the types of users Ms Breck identifies.

Of course, it is obvious that an adaptation process is also key to this. I represent a company that provides professional solutions in this space, and I am joined by others in the DDWG who also provide solutions in this space. There are commercial and non-commercial solutions too. All of these will benefit from reliable device information. The

commercial solution providers already build extensive private databases of such information, but a general standardised solution that could be used by anyone in the Web (including its mobile aspect) is necessary if everyone is to benefit equally.

Please note that some excellent effort has been made within the Open Source community, in particularly the WURFL project. It is therefore significant that both of the people leading that project are participating in DDWG, and we are grateful for their insights. We are also grateful for the input from the OMA community.

All of these people understand that to extend the reach of the Web and ensure that the benefits can be shared regardless of the capabilities or limitations of the devices, it will be necessary to have reliable device information. It is therefore fitting that there are messages on this list from potential user communities (e.g. students of the world) who will benefit directly from a successfully implemented DDR. It is for these people that we put in the effort.

In return, I would ask the representatives of these communities to let their colleagues know that the challenge of device diversity is not being ignored, and that we value your public support. We also ask you to support our "neighbouring" Device Independence group, as their goal is to exploit device knowledge with appropriate adaptable authoring technologies, which may eventually make diversity a real benefit, and not the "problem" it is so often perceived to be today.

Regards,
---Rotan

Exhibit 2 - Porn

My Take on Mobile Porn[xiii]
By Stephen Yagielowicz
Saturday, June 3, 2006

From cave drawings to primitive figurines, early woodcuts to slick, glossy magazines, seedy theatres to DVD-powered home theaters with big-screen, high-definition displays, adult entertainment has taken many forms and has been delivered via many form factors over the past several thousand years.

The latest technological innovations in this arena surround the delivery of porn to mobile devices such as cellphones, iPods and PSPs — but is the promise of "porn to go" for the U.S. consumer merely marketing hype and wishful thinking on the part of mobile service providers, or is it truly the wave of the future? The answer depends on whom you ask.

On a personal level, one of the first things I did after purchasing both my Windows Mobile-powered cellphone and Sony PSP was to load porn onto them. Not because of some maniacal, sex-crazed desire to always have some porn at my fingertips, but because I was curious as to the type of adult entertainment "experience" that these devices actually offered.

While my cellphone's relatively tiny screen (about the size of the Video iPod's) was quite adequate for the task, the PSP's gorgeous widescreen display is simply stunning, offering sharp images and crisp video. The built-in Wi-Fi capability and internal web browser also make this an excellent platform for mobile web browsing, with my only complaint being a lack of "video out" capability, which would allow it to use a television set as a display.

While I have not purchased adult content for either device, I would be willing to, if the right offer came around. I've purchased Hollywood mainstream videos for the PSP and would also have purchased a game for my cellphone had the appropriate version for my phone been available. If I spent a lot of time commuting via public transportation, I would very likely purchase many more, including some adult titles.

Therein is the basis for much of my opinion about the future of mobile material: It's not a question of "is there a market for it?" but "what needs is this market seeking to satisfy?" and "what portion of the market am I targeting?"

Although I have formed my own opinions as to the value of purchasing adult content for mobile devices, I wanted to know what others think about it. Not industry marketers trying to hype their wares or the business they're in, but consumers — those potential customers for these products and services. What I found was a not-at-all unexpected generational gap.

My 15-year-old stepson Michael — while not of age to purchase adult content, mobile or otherwise — already has purchased mobile content in the form of games and ringtones and has expressed a willingness to make additional purchases. His friends, he said, also have purchased downloads for their cellphones. Price point is a major concern, however, with anything priced over $10 being an unlikely purchase for this age group. Doubtless this age group will become mobile porn consumers once they are of legal age.

For opinions closer to my age group, I asked my lovely wife Dawn as well as TGP guru Vendzilla if they were inclined to purchase mobile adult content. Both said no, but for different reasons.

While Dawn opined that most women "are more responsible with their money than that," she said she wouldn't pay for any online adult content due to a lack of perceived value, but she offered that adult magazines and other tangible items were another story.

"If I can hold it in my hands, then it has value to me," she said. "Magazines allow for this, but pictures on my cellphone don't — at least not in the same way."

Vendzilla's objection wasn't to the concept of paying for online adult content but to the format it came in.

"I'm weird like that," he said. "All I want in a phone is the basics. If I want porn, I'll wait until I can get home and take my pants off. I think there is a limited market for it, but for most, they will wait until they get home."

I do believe that age groups play a role in the equation. At the outer limits of the adult market space are folks who resisted the move to cable television service because they could see no value in paying for programming that they could get for free over the more traditional broadcast airwaves. However, younger generations raised on the programming choices made possible through cable and satellite systems and who are aware that these choices will cost money are philosophically conditioned to the concept of paying for content.

The middle ground includes those who had broadcast TV as children but had cable as teens or young adults and understand the value of paying for premium content. This group also includes early adopters of PC and Internet technologies who were raised on shareware and free online content.

But kids today understand the term "members only" and the fact that there's a cost for admission to the "club."

It's really a matter of how to use mobile adult content offerings, not if. But only time will tell if the reality lives up to the hype of the promise, at least for the domestic U.S. market. In the meantime, potential operators need only watch the Asian and European markets for clues as to what will work — and what won't.

Exhibit 3 - NYT

School Phone Ban Stirs, Yes, a Lot of Talk[xiv]
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By ELISSA GOOTMAN
Published: June 15, 2006
New York Times

For evidence that the ban on cellphones in New York City public schools has hit a nerve, look no further than yesterday's City Council hearing, where members clamored to share personal anecdotes. There were tales about their children's phones, stories about their neighbors' children's phones, and memories of the troubles that marred their own school days, pre-cellphone.

Councilman Bill de Blasio of Brooklyn said that the cellphone allowed him a measure of long-distance control over his middle-school daughter. Councilwoman Letitia James, also of Brooklyn, said that in opposing the ban she was fighting for her neighbor, whose granddaughter goes to high school far from home.

And Councilwoman Jessica S. Lappin of Manhattan quarreled with one of the city's arguments for the ban, that cellphones are at the center of fights, by recounting her own memories of schoolyard bullying.

"When I went to Stuyvesant and none of us had cellphones," Ms. Lappin said, "people came from neighboring schools and tried to beat us up anyway."

Yesterday's hearing was the latest forum for a debate that has raged since April, when Mayor Michael R. Bloomberg announced that the police would conduct surprise scans at middle and high schools searching for weapons and other contraband. Principals sent home letters reminding parents that cellphones were also banned in schools, setting off a frenzy at the many schools that have allowed students to carry them.

Never mind that the Council has little authority over the matter, since the 1.1-million-student school system is largely regulated by state law and mayoral policy. Parents, students, principals and mayoral aides testified, and at times, the lawmakers turned pointedly against the administration.

"He has drawn a line in the sand," Councilman Robert Jackson of Manhattan, chairman of the Education Committee, said, referring to the mayor. "And there will be a battle."

Administrative officials, backed by a panel of three principals, defended the ban, saying that students have used phones to cheat on exams, summon friends for fights, take illicit locker-room photographs of classmates and disrupt class.

"The reality is that if cellphones are allowed in our schools, they will be used, and they will be used inappropriately," said Deputy Mayor Dennis M. Walcott.

Mr. Walcott said that since the beginning of the school year, 693 cellphones had been reported stolen on school grounds. Taking a page from his interrogators, he offered his own credentials as a father of four, saying that in emergencies he never had any problem contacting his children through the main school office.

According to the city, the authorities have confiscated 36 weapons, mostly knives, since scanning started — and 3,027 cellphones. Many of those phones have been returned.

For more than three hours, the hearing, held by the Education and Public Safety committees, veered from a debate over the nature of democracy to the problems with mayoral control of the school system to who cares more about schoolchildren's safety — the administration or the cellphone proponents.

It was the first hearing on a bill signed by more than three dozen council members, which would give students the right to carry cellphones to and from school but is silent on what happens after they walk through the door.

"We recognize, whether we like it or not, state education law precludes us from regulating what happens on school grounds," said Councilman Lewis A. Fidler of Brooklyn, the bill's primary sponsor. "Obviously between coming and going, they have to be someplace."

As of now, the Council has enough votes to override a mayoral veto on its bill. While some members said they were willing to take the case to court, Mr. Fidler said he hoped that the Council's pressure would encourage the mayor to compromise.

Councilman Domenic M. Recchia Jr. of Brooklyn suggested that the City Education Department instruct parents to buy their children cellphones without photographic or text-messaging capabilities, inspiring a discussion of whether such pared-down phones even exist.

Mr. de Blasio suggested that the city build lockers where students could store their cellphones.

Mr. Walcott said that while he was "truly empathetic" to parents' desires to stay in touch with their children, the city was "not moving away" from its policy. He said the city was so uninterested in compromise that it would not, as one council member requested, convene a task force on the matter.

Dana O'Brien, 15, a sophomore at Fiorello H. La Guardia High School on the Upper West Side of Manhattan, said she believed the scanning program was "a violation of our right to be free from unreasonable search and seizure, since a turned-off cellphone is not really threatening."

Dana could not stay to answer council members' questions. She was sorry, she explained, but she had a Regents exam.

Exhibit 4 - BBC

Pupils get revision help by text pupils texting[xv]
BBC News
June 11, 2006

Pupils are able to send their queries to their teachers
Pupils at a school in Buckinghamshire have been getting extra help with GCSE revision by texting their teachers.

Far from banning mobile phones, Cottesloe School in Wing has decided to turn modern technology to its advantage in an attempt to improve results.

Since Easter, Year 11 pupils have been able to message teachers from home with revision queries and get a text answer.

The school said "text mentoring" had also seen teachers messaging pupils with revision prompts and exam tips.

"I've used it a lot for science and I've found it really helpful," said Daniel, 16.

"The other night I was sitting at my computer, trying to figure out an answer to a biology question.

"I texted my school for an answer and they texted me back with one or two tips and I got it within a couple of minutes," he said.

"If you're texting, it's modern and new and everyone likes to use it," said Kerry, 15.

"I've used it to get hints and tips about exams."

'Immediacy'

To protect teachers' private mobile numbers and to keep a record of the questions and answers for other students to reference, pupils' texts - which they have to pay for - are sent to a special web page.

These queries are monitored by the mentors who can then respond through the website.

The scheme was the idea of deputy head teacher David Stevinson, who approached mobile phone company O2 for sponsorship.

We ought to be using new technology to improve education, rather than wasting time banning mobiles
David Stevinson, deputy head teacher

Mr Stevinson said pupils often became stuck while revising.

"They will often give up and do something else instead, or continue their revision based on incorrect facts," he said.

"It occurred to me that if they had some way of contacting a mentor immediately when they got stuck, they would be able to get the answer they needed and carry on with their revision."

Mr Stevinson admitted the scheme meant more work for teachers, but said he was lucky to have dedicated staff who were committed to improving results.

The school will compare GCSE results in August with the number of texts sent to see if there is a significant correlation between the two.

Mr Stevinson plans to continue the scheme with next year's GCSE candidates and hopes to offer it to pupils in lower years.

But while O2 has paid for the school's expenses for the pilot scheme, the school will have to take on the cost next year.

"We've got to make sure anything we spend money on is driving up results," said Mr Stevinson.

He said the school operated a policy of "not wanting to see" mobile phones, but new technologies as a learning tool must not be overlooked.

"We ought to be using new technology to improve education, rather than wasting time banning mobiles, which is futile," he said.

[ii] Transcript from NY1 News cable television, May 8, 2006
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[ii] http://mobili.st/
[iii] http://www.hiptop3.com/
[iv] http://xbiz.com/article_piece.php?cat=45&id=15294
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[vi] http://fifaworldcup.yahoo.com/06/en/m/
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