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The Killer App – “I want it now!”

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At the 1939 World’s Fair in New York City, visitors were treated to a view of a promising, more technical future. All kinds of new technologies would be designed to allow humans to do more, better and faster than ever before. New automobiles, highways, and access to information would all make life better and easier than it had been. Now, over sixty years later, the promise of these technologies showcased long ago has been fulfilled. We have faster, more efficient cars, highways that can take us anywhere, available airplane travel, and a myriad of entertainment choices and media.

As we look back on those technologies and their profound effect on American life, we are struck by the length of time that they required to take hold. As we fast-forward to today, the time required for modern mass acceptance of technological innovation has shrunk drastically. New technologies require a short amount of time-- perhaps only months-- to take hold or become obsolete in today’s America. DVD’s, Digital Television, Mobile telephony, the Internet, e-commerce and the rest all seem to have taken hold very quickly. A decade is simply is not as long as it used to be.

An illustration of this last point would be to think back twenty years. Recall the office of the early 1980’s. I was working at Sony Corporation of America at the time. When we communicated with Japan, we did so by Telex, not email, not IM, not even fax – Telex. Telex involved having an assistant type a communication, walk it down to the special telex room and have it retyped and sent at 40 baud to Japan. For those not familiar with 40 baud, in the days before all digital communications, baud was representative of the bandwidth involved in data communications. By today’s standards, it was glacial.

Setting up teleconferences involved contacting The Phone Company (Ma Bell) and working with an operator to establish a multiple connection at a very high cost. No one had mobile phones. Very few people had computers on their desks, although this phenomenon and the resulting extinction of the classic secretarial function would soon occur.

In today’s world, the leap from e-mail to IM does not take long. The leap from fax to email attachment, from circuits to VoIP (Voice-over-Internet Protocol) all happen more quickly than ever before. And, applying Moore’s Law (microprocessor speeds double and

costs are reduced by 50% every eighteen months), we can certainly expect this to continue and accelerate.

But each innovation comes at a price. Not only the monetary cost of evolving, but also the costs of the effect that all innovation has in terms of giving up what came before, especially in terms of human interaction. Living in the present, it is difficult to assume each new innovation “is worth it.” But, clearly technology reaches into every facet of everyday life, not just work, to the point that work and free time become inextricably interwoven for many people.

So, what can we expect? Or as we in the information industry often ask, “What’s the next killer app(lication)?”

In short, “on demand” is, well, in demand. From the standpoint of professional and personal information and entertainment, consumers want it when we want it. The days of sitting around the TV at 8PM and watching “The Ed Sullivan Show” or “Happy Days” are fading. Time and location independence is a key feature. So, the ability to get what you want, when and where you want it is key – and that is what technology will deliver this decade.

Several technologies are combining to offer this capability. The great cable TV network overbuild of the past decade is close to being complete, meaning that most people in urban and suburban areas have at least one broadband provider available to them. Throw in the DBS providers, DirecTV and Dish Network, and the telephone companies’ DSL services, and you have some form of broadband available to every home in America.

So, what is the killer app – the one that everyone has to have? The answer, from a content standpoint, is who knows? However, from a user perspective, on-demand is the killer app. At a time when our free time is being continually compressed, on-demand technologies have the potential to leverage our time better and more enjoyably. Want to watch a movie, pay your bills, do a spreadsheet, and speak with family – while sitting on the train, walking down the street, sitting by a pool? You have some of that now and will have all of it soon.

How will this happen? The answer is the next great technology initiative. Ubiquitous and diversified flavors of network access are becoming available. Right now, network access is limited to telephone and cable TV networks for fast residential services, and some wireless for some pretty basic and somewhat slower, more selective access.

During the next decade, the wireless spectrum, cable, phone and yes, even electric wires will be carrying data back and forth. Right now, many of the large US electric utilities are testing “powerline telecommunications.” This technology offers great promise for consumer acceptance, mostly because power lines are already connected to every home and workplace. Add these wired technologies to the growth of WiFi and wireless and you have a myriad of choices. And, importantly, to a network, voice and video ARE data, so

the combination and mix of these technologies offer us the anytime-type access that deliver unprecedented convenience.

Unlike the present world, where we have specialized networks for telephone calls, television, electricity, mobile telephony and the Internet, we are rapidly moving to a network that is just that – a network. When voice, data and video are all data – why do I need a network that is built for just one of those applications, not all of them?. So, I will buy a network connection(s), and use, buy, or sell whatever I please through that connection. The buying criteria for that connection will be less about my specific application (as now) than about the degree of convenience the connection offers to my current situation. If I am at home, I buy one connection, at a hotel, a different one, in the car a third, and so on. Importantly, because of the ensuing competition offered by duplicative networks, the consumer should do pretty well price-wise.

Further, our method for paying for these services will change. More and more, the telephone companies are moving to an “ISP” model for flat rate calling. In other words, I pay a set amount of money for a connection, and that is the same regardless of how much I use the connection. So the 100+year paradigm of “more minutes / more money” is most likely on the way out. When telephone calls are transported in the same way email is, users expect to pay for them in the same way they pay for the email account.

Further, using the IP protocol, a device may access the network in different places, so rather than your telephone location delineating a street address for where it is located, it now has an IP address, telling the network which device it is when contact is made. This has profound application in a world where terror attacks have unfortunately become commonplace. In the case of the 9/11/2001 attacks, if a worker in lower Manhattan had made it home to his broadband connection with a computer and IP telephone from the office, he literally could plug it into his suburban home and “be at work” even though he might not have been able to get to his office. Namely, his Manhattan phone number would ring in his home or any other location with little modification necessary.

If this same network connection can provide telephone calls, email, fax, television, ecommerce and web surfing, why would we then need to pay for a phone bill, an electric bill, a cable TV bill and a mobile telephony bill? The answer – you won’t. Several of these services will end up duplicative. Companies are now making moves to sell other services, traditionally provided by someone else. My company, OmniMedia Associates, LLC, has been working since 1994 with telephone companies building and selling television – with electric utilities selling telecom services and so on. More and more, the companies realize that the single service business model of getting 100% of service revenue with a customer is a dinosaur. Fact is, you need to get a lesser percentage of more customers. In other words, enable more services to fewer, more specialized people and add value doing it.

So, in the on-demand world, network connections are via the nearest data port, phone jack, electrical outlet or WiFi hot spot. WiFi, Powerline Technology and faster fiber modulation technologies are being deployed all over this country. What all of this means

is that companies will not necessarily have a captive relationship with a customer. A customer may have relationships with multiple network companies when needed, or with one who has strategic relationships with others to allow maximum flexibility of use.

Will advertisers pay for these connections? Possibly some of them. If not, will users in a pay-per-view world allow advertising intrusions? Imagine walking down the street and having a mobile phone or PDA tell you that the next call is brought to you by Coca Cola or some other brand. Most likely there will be a mix. In today's world, we fax some material, email others, send some by US mail and overnight others. In the future, more network connection choices promise the same kinds of choices.

But, unlike the preview of the modern world demonstrated back in 1939, we also need to consider other factors when we embrace the on-demand world. Today's telecommunication industry is built on that more minutes / more money paradigm. There are great numbers of employees required to ensure that telecommunications services are delivered at the highest possible quality. In a world where network services are no longer monopolies, it may be logical to assume that there will be fewer of these employees needed. And these are skilled, knowledge-workers. These workers will need retraining or relocation to other areas or opportunities. Laws assuming the old paradigm would have to be revised to meet the demands created by new markets and new or retooled vendors. Like any other transition period, changes will be profound, and not all of them will be entirely positive.

In the 1960's, Marshall McLuhan wrote, "The Medium is the Message." In a world of on-demand everything through new, competing networks, it could be said that the value of the message just might be the medium.