2001 – International Symposium on Online Journalism

Keynote Speaker

Creating Value in the Internet Economy: Act II

Anitesh Barua, Professor of Information Systems and Associate Director of the Center for Research in Electronic Commerce at the McCombs School of Business, the University of Texas at Austin.

ELLEN WARTELLA: I want to welcome you here this afternoon at the Quadrangle Room of the Union at the University of Texas. And to thank Rosental Alves, our Knight Chair in Journalism for organizing this Second Symposium on Online Journalism. I understand there have been a variety of apologies for the choice of the date, so I won't apologize again to you. But, I'm very pleased that we have such a good turnout. I particularly want to thank Rosental who is quite a remarkable faculty member. For those of you who are in the profession, you should know that Rosental holds the Knight Chair and the Knight Chair system is organized by the Knight Foundation to bring professionals back into Journalism education where they might not have been or to give them an opportunity to come to campus. One of the concerns that I remember when the Knight Foundation began to establish these chairs, was how professionals would be accepted by universities. Well I can tell you that our professional in Rosental Alves, our Knight Chair is very much accepted. This is just one of many conferences he's organized for us to bring out academics and professionals together on issues confronting journalism. We feel very fortunate, indeed, to have Rosental here. So I want to thank you personally for that.

It is my pleasure to introduce our keynote speaker who is a young man and who has already made it in very short order from graduate student to full professor in the McCombs School of Business here at the University of Texas. Anitesh Barua is the (inaudible) Bell Centennial Fellow and Professor of Information Systems and the Bureau of Business Research as well. And Associate Director of the Center for Research in Electronic Commerce at the McCombs School here. He came to the University in 1991 after finishing his PhD at Carnegie Mellon University and his research interests include the business value of Internet-related information technologies, the efficiency of electronic markets and his research, which you'll be hearing about, has been sponsored by a whole array of various companies as well as foundations and others. He has over 45 research articles that have been published in edited books and conference proceedings. He's won numerous awards for his research - doctoral dissertation awards, etc. and research recognition both on the campus and outside the campus, and he is a frequent commentator in the business world, a commentator in the news media. He goes to Washington to update our legislators on what's happening with ecommerce. In short, he is truly a national, if not international expert with electronic commerce. It is my pleasure to bring him to the podium right now.

2001 – International Symposium on Online Journalism

ANITESH BARUA: Thank you. Thank you very much Ellen and for your fine introduction. Now you make it difficult for me to really live up to all this stuff that you say. Good afternoon. Hope you're enjoying your lunch. I would like thank Rosental for inviting me. Just at a keynote a couple of weeks ago, in that time, 2001, which is the annual conference sponsored by our business school, but there my keynote was a little different. It was focusing on the transformation from bricks to clicks really as the key theme behind the Internet economy. But today, I'll focus a little more on contemplative issues, because even though I'm not a journalist, I'm familiar with some of the things that are of concern to journalists. Like the agenda setting role of the press, how it's being affected by the Internet. How the message is being mediated differently. In fact, these days, I was telling somebody a little earlier, that I cannot figure out what's news and what's advertising on the sites - makes it incredibly confusing for me.

So instead today I'll talk a little bit about making money because I'm from the business school and we talk about how to make money or how difficult it will be to make money. That's why I called "Creating Value in the Internet Economy" because the idea is to create value for all the stakeholders associated with your business. I called it "Act II" because we made a lot of mistakes in Act I. Hopefully we will not repeat those mistakes as we move into the second phase of the Internet economy.

Lately another thing that - the Internet has become stronger, or as you know, anything that goes wrong. The problem is some people pay to sell furniture on the net, some people pay to sell viagra on the net, and suddenly the Internet is to blame. It's a big problem that you are facing right now and Fortune Magazine said it correctly, saying the lack of enthusiasm in all things where the Internet has played a role. So people are blaming the Internet for our browsing habits, how we're getting obsessed with the net, what kind of sociological problems the Internet is leading to, but constantly economic facts based on some of the work that we have done, sponsored by Physical Systems. We found that the Internet economy-related revenues - and I'll define what I mean by the Internet economy - it is growing twice as fast as the number of jobs that are associated with the Internet. Of course, we at the business school love that stuff because we want more for less. OK, so arguing that this economy is productive. The Internet economy revenues are becoming an increasingly bigger chunk of corporate revenues and, in fact, in the funds we've studied, it accounts for 22-25% of the revenues. Now you could say, a dollar is a dollar, how does it matter how we get the dollar? Well, all end dollars are better because it implies a more productive, a more efficient way of organizing your business, and in fact we have done a lot of research, provided a lot of empirical evidence that indeed funds those who have embraced the net in all aspects of its operation of the buying and selling, they're actually doing better.

The physical products of companies who sell widgets or digital products companies who really deal with information and other kinds of services, they're doing better. In fact, our analysis suggests that over 3 million jobs are currently associated directly with the Internet economy. So these are not guys who are working on word or excel to do spreadsheets or do typewriting, but really the job that gives you a supporting

Internet operation of traditional and purely Internet businesses. So, it looks like in a relatively short period of time, like in 4 or 5 years, we've come a long way. Of course we need to remember that we are not in Internet years. Analogies between man years and dog years work, right? I mean, one to seven, typically. So even though the web has been around since about 1994, I came around, I saw it in December of 1993. So in Internet we have seen, the web, for quite awhile.

Let me talk a little bit about what we think the Internet economy is about. I've been asked this question before. Why don't we talk about the telephone economy? Why didn't we talk about the railroad economy? Why talk about the Internet economy? That's an interesting question and we have talked a lot about that issue. You know, the infrastructure that follows the Internet economy is quite different. Of course when the telephone came, communication improved dramatically, but did it require humongous changes in the way business operate? Perhaps not. Did it lead to tremendous amount of complementary technological innovations? Well, perhaps not. What we are looking at is kind of this four-layer model of the Internet economy that I and my colleague Annie Winston proposed and actually validated with data back in 1999. Beginning of 1999. We argued that you're talking about building this electronic infrastructure that's based purely on the Internet. And of course the devil is in the details, but economics of this whereby it's a fundamentally different kind of technology compared to telephone or any other information technology that you may think of. We came up with this layered model that saying that this is very similar to what happens in the physical economy. In the physical economy you've got infrastructure like a road and like the transportation system and so on.

So you've got the plumbing pipes of the Internet in layer one. When I say the plumbing pipes of the Internet I do not mean a lot of the traditional information technologies. Because traditional information technologies have been around, including network, for about 40 years now. How come we never saw this kind of movement?

So we're going to run the plumbing pipes of the Internet sitting on top of the plumbing pipes. You've got the software application, the human capital that makes these plumbing pipes of value. So not only on the software on the consulting but talking about the integration services, we have talked about the enablers of the electronic markets and so on. I'd like to point out some economic characteristics that lead to the kind of technology innovation we have seen in this space. Once you have layers one and two, then we came up with a layer that we call individuals - electronic individuals. In the physical world your book store is sort of an intermediary and they locate themselves close to you so they can sell their goods to you at a low cost. But in the digital world we are looking at a very different kind of intermediary. Only you're bringing back - four years ago when I was an assistant professor. Even assistant professors want to drive nice, expensive cars. But they don't always have the means, including in the business school. So I located a high end car on the net. About four years ago, but where's the freight. Because the price was too good to be true. I thought something must be wrong with the car. Four years ago found carpacks.com that claim to have 750 million records of used cars in the United States. All I had to do was type in the bid and it produced a wealth of information about that car. Whether the car had ever been involved in an accident, whether it has been declared as a lemon, whether it had endured damage in a flood or whatever. How many times it had changed hands. What were the odometer readings when it last changed hands? Of course, those are important pieces of information. At the end of the day I paid $12 and 50 cents. Was it worth it? Absolutely. In fact I found that there was nothing wrong with the car. It so happened that this was a small-time dealer in Dallas who didn't have enough working capital and so basically, he had some cash. He would buy high-end lease returns and then mine was only two years old with 15,000 miles on it. My monopolis dealer in town would have asked $9,000 more for the same car. Well, that's because my monopolis dealer in town had more working capital and can afford to make that piece of metal sit on his lot and wait for victims. Right? So. You're talking about a very different proposition today.

By the way, a few months ago I checked back with carpack.com. Has it been successful? Absolutely. Even though alternately they haven't gone the IPO route. They've done well. They claim that they have more than 1.3 billion records of used cars in the United States and from business to consumer they're going b to b because dealers have the same problem. When dealers buy cars, used cars, they do not get to check each one. So they're reducing the uncertainty dramatically and in this case, here I am, a perfectly willing buyer and the dealer, the perfectly willing seller, yet the willingness to buy and willingness to sell would not have crossed each other but for the intermediary. So we are looking at real value being added even though it's not like a well-known name like living.com or go.com or any of these. I think that business model is far more viable. Look at what they're doing. They're basically taking that little thing and they're constructing but a long record by pulling data from more than 100 different sources. So there is value in the aggregation. Of course the economist in me says, stupid guys. I'm looking for information on a rather expensive car. I'd be willing to pay much much more than what they are charging. Because they're lowering bids. If it's a rather high-end inexpensive car or if it's a 20 year old Chevy Nova. If it's 20 year-old Chevy Nova, maybe the guy is not willing to pay $5 for it. Note that the marginal cost is zero for that month they have paid the fixed amount - whatever - a few millicents, that is to pay for that, than do additional costs. So they can be sure, price is discriminate of course, the issues of fairness and ethics can come, but in a business everything is OK as long as it's not illegal.

You look at the ebay model. Of course it's a great model and too bad that UT Austin, in the business school, I and my colleague Andy Winston and our doctoral student, Ram Jalatan, goes with me every morning. Because he showed me the web for the first time in December of 93 and guess what? By June of 1994 we had a fully functioning electronic marketplace with its own electronic currency. Of course we didn't realize that the electronic currency wouldn't fly but at that time we had the stuff and our students were buying and selling software. But he wanted to take it to a business level and of course I was fighting for tenure. So I said, I want to publish this, rather not sell it. But if you look at the ebay model, how many thousands of people are relying on ebay for their daily livelihood. You know, these little Mom and Pop type of sellers. They basically shut down their rickety little store that used to get like 10 visitors a day and they're relying completely on ebay and it's their global marketplace. Initially I used to buy a lot of stuff from ebay. These days I don't. You know why? Because the prices realized are actually much higher than what they should be. Should be in my mind, that is. I'm a stamp collector and a coin collector and these that I'm finding, the prices on ebay are actually feeding 100% of the catalogue value. That's ridiculous, OK? Why? Because it's a global market. Now my wife did her master's degree in journalism from our UT School of Journalism and I was flipping through some of the pages of her book. I used to kind of hear about news being, that media was like news that didn't have enough demand. But I say on a global basis, the Internet changes it because you're talking about local demand aggregation.

Like being from India a former British Colony, I still have the cricket bug in me and guess what? Who would like to report on the game of cricket in the United States? There's absolutely no demand. But when you look at the global picture it makes a lot of sense for Yahoo, an American company, to actually be reporting on cricket simply because we get to enough demand on a global basis. So I'm talking about the intermediary who are reducing the transaction costs and who are bringing buyers and sellers together. Of course, the portal that tried to do that most unsuccessful. You can kind of speculate on the reasons why some of the portals haven't succeeded. A lot of the newspapers tried that same game for awhile - or they're still at it - haven't been very successful and I'll kind of talk about it. But I want to point out that the value proposition is dead. If you can find these inefficiencies, if you can reduce the uncertainty, that's inherent in the electronic market place, it should be possible to charge for it, even though you may not want to charge $12.50. You might want to charge much more than that.

Finally, of course, layer four. The electronic retailing of the direct buy seller type of relationships and it has worked okay except that the etailer haven't made any money. Not because there is not demand. In fact, there's a lot of demand. The problem has been on the fulfillment side of things, but I will stay away from that because in this, with this audience, physical products are less important I would assume. You're going first within content, pricing content, providing services directly over the net that can be charged for.

So I would think that layer 3 is extremely important for anybody that has anything to do with media, with any kind of digital content. We argue that, you know I'm spending a little bit of time on this slide because it's important. Because that's what the whole conceptualization is and I'm sure if you follow the media, I'm sure all of you do. You could not admit some of the stuff when it came out in 99 and ever since. The argument was that there is complementarity between these layers. In other words, when the telephone technology came, can you name some auxiliary information, technology complementary information technology that became equally important as the telephone? Here, look at the complementarity we save - the value of one layer increases as you see more of the other layers. Which means that the twenty something guys go and buy the next generation route that can send your packets at care with B. Immediately the software vendors see an opportunity. Say, okay, now the bottleneck has opened up, at least for the moment. I can hog all the bandwidth so they go and create new applications, new multimedia that can hog all the bandwidth in no time. Which says - the hardware guy - then they go back to the drawing board and they say, look, those guys are just chewing us up. The software guys, like Napster was such a good case. When one of my students say, oh a hundred bits per second is a lot of speed in my telecommunications courses, I actually showed them live demos of napster downloads and I think he was convinced after that that no one on the bandwidth can be good enough than on the software applications you have at hand.

So that leads to this incredible rate of technology innovation. Note that the technology is in the open domain, so that in the past, these technology innovations used to take place in the IBM labs, in the Bell Labs, now Lucent. Whereas, it was the right today, the twenty-something guys who are bright enough who have the background, the technology can go and create it. Of course they have to have a business sense because finally they have to make some money off of this. But they can go into the innovation and like I said, there is a complementarity between layers one and two. Of course, it's complementarity between layers one and two as the upper layers because technology creates new possibilities. Of course it destroys a lot of existing models as the recording industry association is kind of finding out now, much to their dislike.

If you look at what' s fueling this stuff, because I've been asked, well, the dynamo was a great innovation, so what's the big deal about this Internet? Why is and what is the Internet economy? How can I be left wanting market or a set of electronic markets constitute an economy? You know what's the difference?

Well, if you look at how some of the economic forces like externality - positive externality - that the value of my having access to the net increases as others have access to it. That's such a powerful force and applies to cross buyers and sellers alike. So the more folks, not just consumers but more businesses get online, the more valuable it is. So the whole becomes much more valuable than some of its parts. We have seen that with the manufacturing scenario, which is not, a real interest to you, I guess, at this point. But you look at it this way. How much business do we do with Asian countries? For the problem with a lot of manufacturers in Asia is that they're embracing this technology holistically in their business. As a result, the whole value chain hasn't ended up adopting the net. Look at Amazon - some of the problems that Amazon faces. You know, Amazon, if you talk about brand, in the online world Amazon probably has one of the best brands. If not the best. But what's kind of ailing now, well, what's really ailing Amazon is that most of its creating partners, its business partners, the publisher, they're not online. Maybe a couple of them. Maybe five of them are online. They can do business online to Amazon but Amazon does business with thousands of publishers and these guys are simply not online not just because of technology. They don't have the business processes. They don't have, you know, the business process is an accessory to accept realtime audit from Amazon the manufacture of the books on demand. I'm assuming we aren't talking ebooks here, we are talking physical books. Drop those books back very easy. So Amazon is fully digitized in its operations but what's not really digitized in its operations is Amazon's partners. That's why the externalities in part are very important to determine my value of being a part of this new economy.

Of course I dropped of course my complementarity. Potentially lower transaction costs are used potentially - simply because transaction costs relate to the risk. When I buy some content on the net how can I know what the quality is of that content? It's a huge issue. How do I know if it's genuinely not some fake stuff that somebody has put on. So I perceive a risk in doing any kind of transaction and buying this stuff and even looking at content and acting upon some digital content that's available online. So unless somebody can reduce my uncertainty, actually my transaction cost can increase even though I can buy the thing at a click of a button. So transaction cost is not just the cost of, not just the time I spent buying something, it's also the risk associated with buying something outside. That's why I say potentially because electronic intermediaries have to play a very critical role. Take Yahoo. It doesn't own much of the information, much of the content that it provides. So one of the legitimate questions could be, can I trust what I've seen there? That's a very critical issue because I would argue that one of the secret recipes for success would be reliance on others. You cannot do everything in the Internet economy. You have to rely on many, many players. In your field, many, many content providers and how do you know what quality we are talking about? How do you know the credibility of who's pushing the content your way?

Efficiency, productivity and valid creation. Absolutely. You can do things that you simply couldn't do otherwise, okay. Like the game of cricket that I can watch. I'm watching it for free but I would be happy to pay for the webcasting up to a certain amount. So I'm saying you can create new value for your consumers for your users for your customers in ways that you simply couldn't do before. Efficiency and productivity. Efficiency has to do with allocation of resources. You can see that in the way customer service is being provided today. We are becoming less and less dependent even though it sounds bad. We are depending less and less on human customer service reps and we are relying more on technology to provide the interactivity and we are actually helping customers help each other. So we are getting more efficient because we are using resources - allocation of resources between technology and other types of inputs more cleverly. Talk about productivity. Of course, at a national level, our productivity is being driven by information technology. The tremendous number of studies and we have done, so a bunch of studies in our business school and the government itself has done studies so there's no doubt that the productivity gains that we have seen in the U.S. economy are largely due to information technology and that's been in the last 10 years. The fact that we have global electronic markets - this globalization is the key. Just like I was talking about the stamps and points. The fact that the folks from Singapore and Taiwan are outbidding us in the U.S. is simple. It simply uses the fact that those guys cannot get access to those products in their local markets. But they can see them on the web. Because even though the stamps in Singapore may be made in Taiwan, I'm sorry, not from Taiwan, from Singapore. They're all here. So you basically get access to those things through the global electronic marketplaces. Have we changed the way companies are doing collaboration and coordination? Absolutely. In the past we used to share information. Sharing is not enough. Again, I go back to the physical model. You and I share. Okay, how much inventory do you have? You tell me 100 units. But I'm saying, today we have reached a point where we are saying, make designs efficient by products or by content. Can we make decisions about pricing to get? So it goes way beyond basic sharing of information back to sharing of information through the net. Because we are making the Internet a part of our business processes, a part of our decision making on a daily basis.

I'm often asked by students especially in these rather difficult times if it's all coming to an end. I say, gee no. If you look at the number of businesses in the United States, there are 20 million businesses and there are only about 75,000 secure websites. You know, why would you need a secure website? Well, at least to share information in a proper way. You are a healthy organization, you are providing medical information, you would like to do that in a secure way. Which tells me that we have a long, long, long way to go. The reason why that yellow circle kind of goes out of the blue circle is that there are lots of non-commercial websites. Same with the purple circle that there are a whole bunch of secure websites that are actually not commercial websites. So we see that at an economy level, folks simply haven't embraced the net in a holistic way. I'm saying that having a secure website is the very first step. It tells me nothing about your electronic business or your electronic commerce or your Internet initiative in general. It just tells me that, well, you've got a website. But you have to have that in order to do it. So we've got a very long way to go and this is what I meant by the lack of this overall adoption of this medium for every aspect of business, not just buying and selling. Even the creation of content has to be based on the net to really achieve the best that I talked about - efficiency, productivity, and the value creation in ways that you couldn't do otherwise.

So if you look at some of the differences, because I see that in Internet stock analysts, they kind of goof up in the midst of all of these things. When you look at physical products, like widgets. Of course it's priced in, if you follow economics 101, you price at a marginal cost. Of course, your marginal cost is not zero. And of course, the real problem there is logistics challenges and you go ask the e-tailers like Amazon. They're bleeding not because they haven't built a brand. They have built too much of a brand. The problem is in fulfillment. Whereas the digital products, it has a whole bunch of opportunities but it also has some significant challenges. Digital products are information goods, knowledge products, services like knowledge-based services or information services are a huge sector potention. In the physical world, information services are really, really huge. It's not $10 or $15 billion, but much, much, much more than that. Of course, the problem is your government cannot capture what constitutes telecommunication services. The infrastructure services from the content services is very well, so they lump up everything and say it's about $800, $900 billion big. But I would still think that if you did (inaudible) a telecom, it would still be close to probably $500 billion market. It's a humongous mark in the physical world. But the problem, in a way, is zero marginal cost. There's a huge, mixed cost but after that, there is no marginal cost. Actually, even when you talk about customization, the cost of customization is very minimal because it's automated and the problem is, that if you apply the same formula that you apply for physical products, then you should price it at zero, which is what most websites have done so far. One's content website has not been able to charge. Indeed, in the presence of competition, your price is likely to go to a zero. Although, in theory, the price should be based on the consumer's willingness to pay. But it has been extremely difficult to use the pricing strategy simply because of huge competition. I don't' have to go with the Times or requisite newspaper online to get the news. I can get news as we were discussing before lunch, I get the news usually faster on Yahoo, which is also a scary proposition because now your competition can come from virtually anywhere. You don't have to be huge to compete with the large organizations. You can build the alliances.

The digital world, the advantage is the alliances can be built immediately. In the physical world, when Cisco systems or when Dell Computer built alliances, it's actually much more difficult because the physical properties involved in all the inspection, the logistics, the transportation all of these problems come up. Where the digital world is much simpler. Where the newspaper can immediately form an alliance, a digital alliance with a financial institution can form alliance with a health care institution and create a values opposition that's much bigger than what the newspaper could do on its own.

So it's a very different kind of ballgame. Of course, that does spell trouble in a competitive world. You know, I feel that your public is mixing the Internet economy with the dotcom economy, rest in peace, do and just in case you are wondering what the scribble is all about. Well, this is what it's all about. Take a moment to read that stuff. The Fast Company, and if you're wondering, these cartoon were paid for. Yes I respect AP. So I subscribe to the service and that's why I'm using that. Even though I will probably refrain from making copies for all of them. But basically say about the dotcom economy. Now, I don't understand why most people seem to confuse the dotcom economy - I don't think there was anything really called the dotcom economy, but that's what people called it - and the Internet economy where potentially every firm is a player, every company is a player in the Internet economy. Obviously these guys are talking about the dotcom economy and the problem is, with branding, you can take branding to an extreme. Interestingly, note that the unmovers on the net didn't spend money on branding. It was always a grassroots kind of movement. They were there first and that's why they built a brand. Today, the cost of building a new brand online is just astronomical and yet I see really, really stupid moves. One being - how many of you are familiar with wingspan.com. Well, just a few. Look at the amount of money they spent on branding. You're talking about the online bank basically from Bank One. It would have been so much better to call it Bank One.

Nobody had mentioned that we are really connected to Bank One. What a golden opportunity wasted. For your money who do you trust? I mean, you trust somebody who's been around for 150 years or so, right? So you can take branding to an extreme and I'm saying today the concept building brand is just to have. If you don't' have the brand, forget it. If you already have the brand, it's a blessing but you need to act on it very rapidly. The banking sector is such a great example with Wells Fargo. That's a relatively lesser known brand compared to some of the other names. What really had come the forefront is the concept as the leading, organized leading financial institution when it comes to banking online. There are other well-known names that have basically fallen off are not because they're late movers. Sometimes they didn't move late but they actively branded it under a completely different name.

Customer acquisition costs. You're probably familiar with bluemountain.com that got acquired for about a billion dollars. There are 4 million users except that they had not a revenue model. In fact, the owners, the creators of bluemountain.com, they're hermits, but they took pride in the fact they did not have a business or revenue market associated with bluemountain.com and yet the acquisition cost for a billion dollars hoping that those guys, the loyal users would actually go and audit themselves when they use these electronic greeting cards. I'm saying, fortunately act 2, those kinds of things won't fly, not very well.

Ad revenue. This interest in ad revenues then I'll talk a little bit about ad revenue. Then I have some strong opinions about online advertising and like I mentioned, I'm a little upset that I cannot figure out what's an ad and what's really news or real comment. (inaudible) but I'll talk about the policy of depending on some advertising revenues based on the assertion. On the Internet, I can know exactly who you are. I'm saying there's a dollar if I can know exactly who you are. So we have to come to think about some other models. Content providers often overestimate the demand. And people's willingness to pay. I think folks are figuring out now, you know, you take street.com, the financial content provider. They're finding out how difficult it is to make people pay. Even Wall Street Journal which is probably the only major success story online subscription based content, even they are, as I say, I read it somewhere, the layoff failure has visited them too. So you can see that it's becoming a problem, although I think this matter with revise dramatically and very quickly. Because the venture capital has been taken out of the equation. So that changes the picture overnight.

Suddenly you'll see that people will be able to charge for content. Which they have not been able to do so for so long. So I'll kind of get to that in a moment. But I just wanted to point out that these dotcoms ran into severe problems with logistics - those who were dealing with physical goods. They ran into problems with the revenue models because they are primarily based on advertising. At the end of the day our number suggests that they make up less than 10% of the Internet economy revenues. It's the Dells and the Ciscos and the General Electrics of the world that make up the numbers. If you take out AOL or Yahoo out of the picture, then it drops way below 9.6% and they make up less than 12% of the Internet economy jump. In other words, even if all of them went out of business today, immediate, the impact would still be about 10% on the overall economy. Yet of course, I understand why the business world might like to write about these too because they are exciting to write about. When GE sells 30% of its product online, they say, what's the big deal. But when a billionaire, a goateed billionaire suddenly has to file bankruptcy, that makes for a much more exciting story, I guess. The entertainment value is much, much higher when you are doing this. But in reality from our standpoint, the economic impact is very minimal if all of these guys went out of business today.

And of course, I just wanted to share with you some stuff. You may look at that proposal written by a goateed millionaire on the venture capital, capitalists are being

- their name's on a rolodex. But just wanted to point out that this is not the Internet economy, This is just a dotcom and they make up less than 10% generally in terms of revenues and of the jobs. I just wanted to point that out.

So, let's look at a little bit of online advertising because it looks like content. A lot of the content has been free on the net. Mostly free. Everybody was banking on the online advertising revenue, and you know what, I have a story to tell. About 3 years ago, in 98, I was teaching advanced data communications in the business school and we were talking about pricing Internet services. I was trying to use economic principles, saying there's a congestion that's caused and where there's a congestion, there's a social force that pulls on everybody so everybody suffers. So you've got to make everybody pay to reduce that congestion. Standard principle of negative externality - remember I talked about positive externalities before? Immediately students raised their hand and said, what about net zero? The free online service provider. I kind of got a little officious and said, well, the name seems to be indicative of their future worth. Then a girl got really upset with me. She sent me an angry email saying, "You think you know it all. You'll be proven wrong on this." Well, I don't know where she is right now, but I'd definitely would like to tell her, well I have the last laugh. I mean look, as you give me the ads on TV, expensive ads, this fashionable lady saying "Oh, shouldn't the Internet be free for our kids, our next generation, blah, blah, blah." Well, the problem is the economics doesn't support it. Even though the marginal cost zero is a huge fixed cost. Who would pay for that cost? Of course, they thought that by showing viagra ads, we'd be able to make up all the money. I saw this thing. I disagree with it. Erica Gunther wrote this Harvard Business Review paper on richness and reach. Of advertisements, of new, or information. Their argument was, in the physical world, you either have reach or you have richness. But on the Internet, you can have it all. Well, the idea is that on the Internet the curve starts moving along the arrow that I've shown. Because they say on a TV commercial, a 30 second commercial, you've got a lot of reach but no richness, and in the newspaper you can have a lot of richness but limited reach because of the cost of the newspaper and the transportation and a lot of these things. Their argument was that on the Internet we can overcome the barriers.

But the Nobel laureate, the late Harvard Steinem, stated that when he said over about 3 years ago, that the Internet has incredible richness of information and content. But abysmally poor when it comes to attention. Somehow, every content offers content by operative we can't believe I don't know why we're going to live our lives on the net. I don't know about you. I mean, for me, the Internet is not a place to relax. I go in, I look at stuff I need, I get out. I've used the net since 1985, ever since I came to this country as a PhD student. So clearly, I bought into this. I've never been able to collect data on this but I think I'll be able to validate the more you get used to the net, the less time you spend looking for stuff. And you get out of it. That's not my idea of relaxation. My idea of relaxation is glossy magazine that I can sit with for about an hour if I have the time. But I do not spend my life on the net because I have, people have other things to do.

So clearly as the novelty wears off, getting someone's attention becomes extremely difficult. Just look at the dilemma of online advertising. To make money you cannot have one or two folks advertising with you. You have to have lots and lots of advertising. When you have lots of advertising, you have to show me quite a few of them, right? It's not for click through. You know, click thru rates are really abysmal today. They're like .26%. That's the number I saw. But even impressions, they are absolutely no impression on me. I believe that I cannot be the only one. I would think I'm a fairly general, kind of a typical kind of person. Where the novelty was there and it should be, and then it starts wearing off very, very quickly. And to start with, the pie cannot be that big as we might have thought. Simply because there are a billion things going on the net. The total size of the pie. If online advertising dollars, if those ad dollars is x billion dollars, I don't think that we can believe or we should believe that online advertising will ever be x by 2. Or 2 by x. So that's a big problem. The last line is critical. There are few great whites in this space. When I learned statistics in college, our professor had a nice way of teaching statistics. He was telling people your probability of winning the lottery is virtually zero. But what is the probability that somebody will win the lottery? Well, that's actually quite high that somebody will win the lottery.

Similarly if you are on the site, hoping for ad revenue to come your way, well you are, the probability of doing that is basically about that individual winning the lottery. But, look at AOL, Yahoo, look at MSN. The eyeballs are there. For AOL, we are talking about 54 billion eyeballs. So naturally, with that concentration of eyeballs, it shouldn't surprise us that whatever advertising dollars there are, you know a good chunk of that will go the way of AOL. So AOL is a different proposition. Or Yahoo. When I checked last time, they used to get 750 billion page views a day. Even though they have been hit very hard about 12% of their workforce right now, still I would say that if anybody would collect the revenues it will be AOL, it will be Yahoo, it will be the MSN of the world and not the others.

Simply because others do not have the critical mass of users that advertisers would like to see. So that's why I think that buying is not so big to start with and hence there are a few great whites who take big bites out of their sites leaving morsels and crumbs for the rest. Which is simply not proficient, Rosental forwarded me this Morgan Stanley Dean Ridder Report and I read through it and I was surprised. It's generally upbeat on online advertising. Saying the Internet is still small. I didn't think so. I thought that more than 400 million users on one of my paper which is big, because you cannot expect to break 80% of India's population online anytime soon. Same with China. So, if you leave out what 80% of India's population, you leave out about 70% of China's population, then you are left with a rather smaller number. That 400 million will be a huge part - especially in the U.S. 155 million as of November 2000 were already online, so I don't see how most people will come online in large numbers and how online advertising will get a new life. You know, the next one, also from the same report, and my reaction to that is, I thought we are done for that equation - you build, they'll come. I think our experience has shown that if you build they will not necessary come. It depends on the value proposition that you are providing.

So I've been skeptical of some of the reports that are coming out saying, there's a big and bright future for online advertising and there are privacy issues, significant privacy issues that people will get more and more wary. I don't know how many of you have the misfortune of having your identity stolen. It has happened to me and there's a guy on ebay who calls himself or herself Anitesh Barua. And guess what? I got kicked out of ebay. I saw within 7 days of their opening for the crummy little site full of bugs I saw it and then I probably was one of their very first customers to go and buy stuff from ebay, and I got kicked out because somebody has assumed my identity and is going around. It's a really scary proposition. I wait till these kind of things can be operated. I think this is much more difficult to control than your credit card fraud. Because you are going to be really, really wary of providing any kind of information to ports on the website. Only a few will be able to gather that kind of information. In fact, we may have different models of information gathering. Maybe we will have centralized agencies to collect information on our behalf and then disseminate that information on demand with our approval. Because today, we provide information distributively. You go to 15 different websites, they all want to know about you. It's a mess. It's a complete mess out there. Not to speak of legislation which the Congress is definitely talking about legislation. In the Senate it's going on. So you see these kinds of things going on all the time. You know what, the value of online information will become more valuable or will increase only when you can combine it with information from other sources, from off line channels. And legislation is likely to be part - they'll actually ban that kind of combination. Today, when an airlines looks at your browsing behavior, don't think that that's the only information they use. They're using information from many different sources and that's what gives them a more complete picture. A 360 degree view of my overall preferences and I'm saying while the technology will make it easier and easier to do so, there are some serious privacy issue and DoubleClick is in real, real trouble just trying to do that - combining online data with offline data. So there are some real issues there.

I don't need to tell you about this, but you know, well, it's funny that these days you are seeing funny things like, go dot com go, hire dot com buyers, living.com dies. So you're seeing all sorts of creative combinations and it's interesting. Like I said, when Wall Street Journal adopted wsj.com, kind of shrinking it's operations and I was a fan of new york times digital and clearly I was really disappointed to see that even that operation is shrinking. Nbci.com after so much fanfare, after so much advertising on traditional media, basically poured it back into their traditional operations, so basically being forced to say not good enough. Only, which is contrary to what we hear on the net. On the net we hear that it is going to be - there's room for everyone. It's a level playing field. But I think it's going to be the killing field because inefficiency is not tolerated and only when you have the install base of users, only when you have the critical mass you get their advertising dollars or the kind of benefit - because I said externality, positive externality drive a lot of the values. So I think the consolidation is the enemy. It's happening as we speak. Fortunately, actually, the venture money has dried up.

Venture capitalists are still funding some technology propositions, the next generation chip they are still looking at - oh you see I'm going to make enterprise software if you're looking. I'm going to offer it in other content sites. So clearly, venture capitalists are not finding stuff anymore so as a result, a lot of the free content I think will go away pretty soon. Simply because the side companies are doing this in the name of customer acquisition and don't want to be able to charge. So I think the dot com has kind of shown the way for the unknown. It's premature for them to start charging for content but it's in their future and I wouldn't be surprised to see many more players jumping into this game of charging. I think initially a model that will remain subscription based. Because even though we couldn't do microbase, the biggest problem with micropayments had been acceptance. Consumers simply do not want to adopt some concept that is not fully understandable. Digital cash. Digital coins. These concepts have been around and actually implemented as early as 1996. They haven't seen the light of the day. I hear a reincarnation is on the table, but I'll believe it when I see it.

So, I'm just wanting to point out that I'm hearing - in fact, let me skip this. You know this technological euphoria is kind of scary. Then wireless, this will change everything - and I believe it will - but I warned you when I see the bullet in the mist - that wireless will reincarnate things like online advertising. I don't think so. Because of the device, I'm trying to get something useful done and you have to see me reach into active messages. I'm not going to buy into it because I don't see the business model. I see too much money has already been spent on this wireless technology and yet all I've seen is game and interactive messages - hey, I'm here! Can you see me? That doesn't help you with all the $100 billion that your telecommunications carriers have already spent. So faster is better, sure. But don't we have billions of bits per second on the backbone of the Internet? Let's see some money. So it has proven to be much more challenging. Basically I'd like to point out that we made the mistake of thinking that Internet is competing with our traditional channel. We need to complement. Think what we can do in print. Think what we can do online. You start looking at it that way, suddenly you don't look at the online and the offline channels and competing with each other, as cannibalizing each other. You see them more as complementary and you have to ask the question, what is unique about the net? Maybe I can get to a worldwide audience for providing that has limited demand in my little region but on a worldwide basis I have a lot of demand for that thing. The community model still rocks. America online - just a quick anecdote. I mean I used to call AOL a dump. Dump AOL because I thought they were not techno savvy. I say that in Singapore and got in real trouble with an English girl. She got really upset with me and said to me about that TCP/IP stuff. I can do it in my sleep. I'm a professional. But you know what, I've found my little community. Other expatriot British blokes. I don't like to pay $22 a month to these guys, but you know what, if I want to switch, I'll have to switch the whole gang. Who has the time to switch the whole gang. I said, long live AOL. I mean, the community model rocks because they have the building switching costs.

Of course, not everybody will make it. Because not everybody can create that switching cost. So unless you can build a community model, there's no switching costs associated with your sites, with your main content provide, you can switch and go to the same content somewhere else. Like I said, competition can come from anywhere. From the most unlikely quarters because your competitor may not be a large organization by itself, but by building alliances they can be come very, very formidable. That's why I'm saying these partnerships and alliances are critical and you'll see kind of strange bedfellows. Most unlikely players forming alliances like a newspaper and health care organization. Or financial institution and a newspaper. Or a magazine. So these central alliances will create tremendous values and gain the worth of the whole is worth much more than the sum of the parts. I think you will be able to charge for content sometime soon. Although not - I'm still kind of skeptical about the advertising dollars. Finally, think about all the exchanges, the electronic exchanges for content. I see that. When news organizations are buying and selling content from each other as much more viable than immediately going and making money off consumers by providing them content. Simply because enforcement is relatively easy. I'm not saying it's that easy, but it's still easier than trying to enforce it on the twenty something guys for whom any kind of digital protection that you put in becomes a challenge to mentally break it as soon as possible and to share it with everybody on the net.

Thank you so much.

ROSENTAL CALMON ALVES: We have time for a couple of questions only.

AUDIENCE QUESTION: It's more a confirmation than a question. Herb Steinem I don't think ever saw an 8 year old playing an online computer game. If you ever try to pry a kid off of a computer when they're playing with your game, it will really rivet their attention and it can be a struggle for a parent. But I wonder just a little more about micro payment. A friend of mine who is an investigative reporter and knows a lot about computers, made this suggestion about 12 years ago that it might be interesting when you some day would have handheld wireless devices. You're getting on an airplane, you could check the serial number against the database and find out the maintenance record of that plane. Do you think that there's a potential for micro payments - maybe the news organization or news organizations in general set up something where they could make a nice interface like that into a variety of databases so that people could find useful little ways throughout their life - especially when we are mobile so that we could get access to little pieces of information that would be useful to us in circumstances and we might pay, say, a couple of bucks a month and then you'd get a free 10 downloads or something like that.

ANITESH BARUA: I think that's a great question. But micro payment came first in 94, 95, 96. At least commercial products. It was too much too soon. Because on the net we didn't really have those capabilities that are selling offering like the little game or the service that you talked about. So probably micro payment will have a second chance with wireless. It's proven to be very difficult to make people pay. I say the PC is a black hole. You sit in front of a PC your willingness to pay kind of goes away, but when you are mobile, it seems that people are perhaps more little willing to pay. So the only problem is with the acceptance. But maybe you're not with the business crowd and the business crowd will generally, going to be more willing to pay, more willing to try out the technologies, whereas in the general population it can prove to be a little more difficult to make them accept micro payments where you have to set up an account with an online bank and then to say you are downloading digital coins onto your wallet and that kind of stuff. So I don't want that as a social kind of adoption double issue, rather than sort of a technology issue. You're absolutely right. Business travelers are more likely to adopt that much sooner than everybody else in the world.