

1 with.

2 In order to address this, our CableVision's  
3 position is basically to have a platform in place and the  
4 partners in place so that as these applications evolve over  
5 time we will be best positioned to do this.

6 This all fits in with what CableVision's overall  
7 digital strategy is. Basically, we are concentrating all of  
8 our resources on the nation's prime entertainment and media  
9 market in New York, focusing fully on building out our  
10 digital platform to support new services and driving new  
11 revenue streams by leveraging these content and  
12 entertainment assets over the new distribution platform that  
13 we are putting out there.

14 Given all of the assets that we have at our  
15 disposal and focus in the New York area, we feel well  
16 positioned to be able to leverage all of this content and  
17 our platform to drive new revenue streams.

18 What are we doing in terms of specific digital  
19 rollouts? Basically the Sony-CableVision partnership links  
20 premier names in broadband and consumer electronics.  
21 CableVision announced its purchase of the Sony set top box.  
22 We are doing a pilot trial in late 2000, leading towards a

1 Fall rollout in 2001

2 The interesting thing we are doing I think  
3 different than anybody else is we are doing a full market  
4 changeout and this will lead to the opportunity to give more  
5 users the ability to interact and experience some of these  
6 new products that are out there. Hopefully this delivers on  
7 the promise to provide new generation digital service on the  
8 state-of-the-art system.

9 In terms of applications that we see going out  
10 there at the beginning, most of these have been talked about  
11 by Ed in his original presentation so I won't go through all  
12 the details but enhanced TV where you are looking at  
13 programming content and you are able to link through to more  
14 detail behind it, video on demand. This could be full  
15 feature films or could also be a whole range of smaller  
16 segments of films that could be triggered.

17 Messaging -- how do you have access to  
18 cross-platform messaging system and derive social  
19 interactivity between people that live in a local community.  
20 T-commerce we have heard a lot spoken about and the  
21 potential for that. Interactive content and services, it's  
22 the concept of the destination sites and how do you create

1 controlled content that will maximize the viewer's  
2 experience in the television environment.

3 Finally, interactive advertising and the potential  
4 of that.

5 Down the road where does this leave us and where  
6 are we going with our digital platform? Basically the set  
7 top box becomes the home connection and this leads to a  
8 whole range of other types of devices that you can connect  
9 in the living room -- personal video recorders in the form  
10 like Replay, game consoles, cameras, music, home security,  
11 being able to print stuff out.

12 I think as we are able to add these other types of  
13 devices on it, we are going to see a whole bunch of new  
14 applications and services that will affect and become part  
15 of interactive TV.

16 What we are looking for in terms of content  
17 providers, one, it has to be more than just TV. We need to  
18 make this a new experience that it different than what  
19 people have seen in the past. We need to teach people how  
20 to interact with their television set in a new way, so  
21 applications that are in effect training wheels for  
22 interactive TV. If all you have is a remote and an up/down

1 and select button, how do you get people to start to use  
2 this to interact with the TV so you can lead them to  
3 interactive advertising or t-commerce; looking for people to  
4 be able to deliver in the interactive TV environment; local  
5 content and services I think are going to be particularly  
6 well-suited and drive usage; and looking for new ideas.

7 We think people in this room and people at the  
8 show, you know, are some of the most creative people out  
9 there. You are going to come up with the new content ideas,  
10 the new types of applications, and these are all going to  
11 evolve over time as consumers become more familiar and used  
12 to using this different medium, and we are looking for  
13 everybody's new ideas -- so thank you.

14 [Applause.]

15 MR. KNUDSON: Great, great, great. Thanks, guys.  
16 Very informative.

17 What I want to do now is shift our discussion into  
18 these for different topics that we talked about earlier,  
19 starting with content.

20 What do each of you think is the most compelling  
21 service that can be offered in interactive television? I  
22 know what you are going to say -- so I will start with Alan.

1 Alan, what do you think? And I will ask you to keep your  
2 answers somewhat brief so that we have time for the  
3 questions from the audience.

4 MR. TIGASON: Well, I think a couple things.  
5 First of all, there are different stakeholders involved so  
6 compelling from -- let's start with the viewer.

7 First of all, there are a lot of people out there  
8 who are suggesting that interactive advertising is somehow  
9 going to drive consumer acceptance. I think that that is a  
10 stretch. I think the best you are going to do with  
11 advertising is to have people tolerate it. You have got to  
12 focus on the programming side.

13 I think it is symptomatic that EPGs have been the  
14 first killer app with interactive television. I think  
15 beyond that the things we see that are working particularly  
16 well right now are information on demand -- those are also  
17 perhaps the easiest to produce.

18 It is pretty challenging to do compelling  
19 interactive content for narrative-based television like  
20 sitcoms or comedies and drama.

21 I think communication services, chat, and e-mail,  
22 instant messaging in the context of television programming

1 that you are familiar with, it's already popular for people  
2 who are using two screens at the same time on their PC and  
3 watching TV at the same time. You are going to see that  
4 converge onto one platform, the cable set top.

5

6 [END, SIDE 1.]

7 [BEGIN, SIDE 2.]

8

9 MR. TIGASON: [Continuing] First of all, you have  
10 got to satisfy viewer needs, so you are going to want to  
11 have a robust amount of programming. Beyond that, you want  
12 to meld advertising and transactional messages in as  
13 seamlessly as possible and the beauty of this medium is that  
14 it becomes contextual commerce and so to the extent you can  
15 do that in the context of your programming, your  
16 advertising, that is a positive.

17 Finally, with a nod to Dan, I think, in VOD is  
18 obviously a very powerful proposition for consumers.  
19 Whether it is server based or PVR based, I think that the  
20 opportunities for VOD have perhaps the most profound  
21 implications for consumer behavior and to the extent you see  
22 widespread deployment of PVR type technology that will

1 impact everything else, interactive advertising, t-commerce,  
2 et cetera.

3 MR. KNUDSON: I would agree. Craig, your  
4 perspective obviously is that it is not any individual  
5 service but maybe an amalgamation of all of them to create  
6 these megaverticals that you talked about.

7 MR. ENNENSTEIN: Yes. I think that's true. I  
8 think for the content provider I am very much of the mind  
9 that it is the commerce that is going to be the application  
10 that is the most compelling, to create the kind of cash  
11 machines that home shopping is today in a more powerful way.  
12 We are talking about the potential of tens of billions of  
13 dollars of revenue and billions of dollars of cash flow. I  
14 think it is going to be overwhelmingly the lead opportunity  
15 from a programmer's perspective.

16 From the consumer perspective I think it is  
17 without question the customization of their viewing  
18 experience.

19 MR. KNUDSON: Yes.

20 MR. ENNENSTEIN: For me to be able to sit down on  
21 my schedule and see what I want -- the rest of it,  
22 interesting, enhancement -- that is what is going to drive

1 people's excitement. Those are the two.

2 MR. KNUDSON: Brian, what are your subscribers  
3 telling you?

4 MR. SWEENEY: I think obviously the t-commerce  
5 type opportunities as well as the communications types  
6 applications, that will really promote the interactivity  
7 between people, especially in a local area.

8 SPEAKER: Let me guess --

9 [Laughter.]

10 SPEAKER: Setting aside the obvious, the two most  
11 compelling applications that I see deployed today are both  
12 in the arena of sports. I think what Kanalplus is doing  
13 with soccer, what they call football, and the sports-active  
14 application that is running on the B Sky B network, both of  
15 these allow users to customize their sports viewing  
16 experience to get instant replays on demand, to find out  
17 when a goal was scored in a game which isn't the goal that  
18 they are watching, et cetera.

19 From the viewer's perspective these are incredibly  
20 compelling applications and they are applications that are  
21 shipping today.

22 MR. KNUDSON: Let's talk about distribution for a

1 minute. Brian had mentioned earlier that interactive  
2 television is somewhat of a controlled distribution market.  
3 How integrated are you going to expect content providers to  
4 be with the various core services that you are providing,  
5 such as e-mail, e-wallet, et cetera.

6 SPEAKER: I think the important point there is the  
7 one that you raised earlier, is that it needs to be consumer  
8 friendly. You have a whole bunch of new people that are  
9 starting to be introduced to interactivity. People aren't  
10 going to want to have to deal with multiple mail systems or  
11 chat systems so you are going to want to have one system  
12 there that maximizes the consumer's experience and I think  
13 that leads to a lot of other things, just in terms of how  
14 navigation works, how people interact with it.

15 It is going to need to be a consistent experience  
16 just so people become familiar with it and can interact with  
17 it.

18 MR. KNUDSON: Would you agree with that, Dan?

19 MR. LEVIN: Yes, violently.

20 I think any service provider who thinks that they  
21 are going to deploy a service that is going to be unique,  
22 different, set aside, carved out from the other services

1 delivered on an interactive platform is deluding themselves.

2 The viewer expects the experience to be seamless.  
3 They expect all the services to present a similar look and  
4 feel and to have a cohesive behavioral model and it is going  
5 to be a requirement for service providers like the two of  
6 us.

7 SPEAKER: Right. Absolutely. We already spend a  
8 tremendous amount of time integrating with EPGs and web  
9 browsers and as more applications are deployed you are going  
10 to see more of that.

11 MR. ENNENSTEIN: The PC sucks.

12 [Laughter.]

13 MR. ENNENSTEIN: And if the distributors emulate  
14 the PC in any way, shape or form in terms of reliability,  
15 look-and-feel, it will suck.

16 [Laughter.]

17 MR. KNUDSON: What do you mean, Craig?

18 MR. ENNENSTEIN: The reality is it has to be  
19 absolutely seamless. It can't crash. It has to work. It  
20 has to be something that the lowest common denominator  
21 person can use. It is a mass market product, which is not  
22 what the PC has been.

1           It has to be a very simple, easy, safe,  
2     comfortable, consistent experience.

3           MR. KNUDSON: So how do you do that? If you are a  
4     content provider and you are trying to get into multiple  
5     networks and each network is offering a different piece of  
6     hardware, a different operating system, a different  
7     middleware solution, and then on top of that all these core  
8     services, for example CableVision may offer a very different  
9     e-mail system than does Comcast or Cox, how do you as a  
10    content provider develop a single piece of content and make  
11    it work across multiple networks?

12           SPEAKER: You can't.

13           I think the reality is there's going to be a lot  
14    of work done on interoperability. It can't be done in a  
15    simple fashion. There are a lot of great things being  
16    innovated. The type of work that is being done by WINK, the  
17    type of work that is being done by Microsoft, by Open TV, by  
18    Kanalplus, by any one of many companies is very exciting and  
19    very powerful, but they are all very different, and the  
20    challenge for a content provider is to create a seamless,  
21    unique experience that is always comfortable and the same,  
22    yet at the same time doesn't cost them an arm and a leg and

1 economically put them out of the game.

2 MR. KNUDSON: Right.

3 SPEAKER: I think what ultimately will happen is  
4 we are going to have to see consolidation to a very, very  
5 small number of platforms so the many times of writing  
6 becomes as few as possible and interoperability tools gets  
7 us as far as we can get, but I think it can't be done.

8 MR. KNUDSON: Alan, your perspective?

9 MR. TIGASON: Yes. I agree with that. I think  
10 there are a few platforms emerging. We have made a  
11 significant bet that an HTML based protocol will be what  
12 ultimately is the dominant platform in the U.S. but it is  
13 still very early to say that that will actually happen.

14 The boxes that support that protocol haven't yet  
15 really been rolled out by operators, and when it does and  
16 there's still all the other integration issues with wallets  
17 and mail, et cetera, so I don't think that's going to be a  
18 panacea and even if it was that standard was designed with  
19 2001 hardware in mind and the temptation to develop a new  
20 one for hardware that comes out in 2003 will be  
21 insurmountable and everybody will say, well we just want to  
22 do all this stuff because the box can do it, and the old

1 platform doesn't do it, so I think you are, the dream of  
2 having this one platform that survives for many years, I  
3 think it is a pipe dream.

4 MR. KNUDSON: Which -- I'm sorry, go ahead.

5 SPEAKER: I just would agree with all of that and  
6 I think as the platforms either consolidate or stabilize a  
7 little bit and hopefully there start to be in effect content  
8 provider guidelines out there so that people who want to  
9 publish to a defined environment that that information is  
10 available, and hopefully there are some standards that  
11 eventually will evolve in terms of user interface,  
12 navigation, what some of the interfaces are between these  
13 systems to make it much easier for the content providers.

14 MR. KNUDSON: Right. Much of what we have talked  
15 about so far really is contemplating an advanced digital set  
16 top, one that has got high speed, two way connectivity. It  
17 has got memory and operating system, middleware involved in  
18 there and graphics, high resolution graphics.

19 SPEAKER: And a disk drive.

20 MR. KNUDSON: And a disk drive.

21 SPEAKER: Don't forget the disk drive.

22 MR. KNUDSON: Sorry, and a disk drive, yes, so

1 what do we do in the meantime as we are waiting for these  
2 set tops to come out? There's millions of base level  
3 digital set tops out there today and that will probably be  
4 doubled by the time the advanced digital set tops come out,  
5 so what do we do in the meantime? Alan?

6 MR. TIGASON: Well, I think that our company was  
7 founded on a couple principles, and one of them was follow  
8 what they do, not what they say. In the cable business,  
9 that means focusing on the boxes of people who are actually  
10 deploying as opposed to ones that are talking about  
11 deploying.

12 We spent some time on the advanced analog side.  
13 That is clearly a legacy platform now, but we are available  
14 in all of the digital set tops, baseline digital set tops.  
15 that the cable industry is rolling out and that the  
16 satellite industry is rolling out right now, and if you look  
17 at the volumes there, they are astounding.

18 There's -- if you look at Kagin's numbers there's  
19 going to be five to six million interactively capable  
20 satellite set tops and a similar number of cable set tops  
21 that in this year, that's likely to double by next year, and  
22 I suspect that almost all of those will not have a cable

1 model or even really huge amounts of memory or processing  
2 power in them, and we see that as a significant opportunity.

3 There are a lot of services such as the ones that  
4 Craig has mentioned that are deliverable on the platforms  
5 that the industry is deploying today and the key is not to  
6 get confused with everything that you could possibly do and  
7 focus on what you can do, and it is very compelling.

8 MR. KNUDSON: Let's talk about revenue, how you  
9 make money out of all this.

10 What do you guys think is the most lucrative  
11 business model, the most realistic business model? Is it  
12 subscription-based, is it advertising driven? Is it  
13 t-commerce? Is it a combination?

14 SPEAKER: I think it is very clear to us that it  
15 is not a subscription-based model, at least to the degree  
16 that that subscription fee is incremental to the  
17 subscription that the viewers is already paying for  
18 television programming. The end-user is quite certain that  
19 they do not want to pay for interactivity.

20 On the other hand, I think there is tremendous  
21 opportunity in various non-subscription based revenue  
22 streams and on the commerce side as well as on the

1 advertising side, I certainly believe there's a lot of  
2 opportunity for people to make real money, not just panning  
3 for gold, as you said.

4 MR. KNUDSON: Craig.

5 MR. ENNENSTEIN: I would agree. I don't think  
6 it's subscription based. I think what our approach will be  
7 is to provide the interactive services out there that  
8 encourage the consumer to use them and the revenue model  
9 will be more on a per transaction, per event usage based  
10 model.

11 MR. KNUDSON: Okay. Good.

12 SPEAKER: I think one incremental thing to think  
13 about is if I were a programmer today, making informational  
14 or entertaining content and I decided that it would be a  
15 great idea to add interactivity to it. I would be very  
16 concerned that all I was really doing was raising my cost  
17 bar and not affecting my revenue at all.

18 What I mean by that is if you are ESPN and you  
19 create a wonderful pull-down menu that shows all kinds of  
20 great, fancy statistics and it looks wonderful and you have  
21 spent all that money to make it happen, I guarantee Newscorp  
22 will follow suit and you will not see increased ratings

1 because everyone else will follow suit.

2 If everyone does it, all you have done is raise  
3 your cost bar and the only way you are going to pay for that  
4 is if you can somehow find a way to put up a little banner  
5 out or some other way to bleed revenue out of the system,  
6 but you may find that all you have done is increased the  
7 cost and squeezed your profits and that is a very dangerous  
8 possibility.

9 SPEAKER: Right. I think I would add to what the  
10 two previous speakers have said, that to the extent that VOD  
11 services such as Replays become very widely deployed, that  
12 obviously has some very dramatic impact on advertising  
13 revenues and I think you will see that.

14 The adding to the pressure to add transactional  
15 capabilities to television, because you have to recoup that  
16 revenue somehow, and while you will see squeezebacks and  
17 sponsorships and more product placements and a bunch of  
18 things that will try to get basically, subliminally insert  
19 advertising messages into television programming, that is  
20 all kind of rounding error stuff compared to the CPM  
21 revenues that the networks generate today.

22 The only major revenue stream that has the

1 potential of helping out with potential adscaping is  
2 commerce. I think you will see that confirmed in a number  
3 of analysts' reports. I know that Forester Research  
4 believes that very strongly.

5 MR. KNUDSON: Great, thanks.

6 We have roughly 10 or 15 minutes left, so I would  
7 like to open it up to questions from the audience. It looks  
8 like we have someone standing at the microphone. We have  
9 two microphones here, by the way, and I would ask you to  
10 step up and ask.

11 MR. LEMM: My name is Nick Lemm and I am a partner  
12 in a technology strategy firm in Colorado called Solista.

13 In keeping with the spirit of the title of this  
14 session, "The Time Machine," I would like to ask all of you  
15 to go back to the time period between 1993 and 1997. For  
16 the younger folks in the audience, this was before Liberate  
17 was known as Network Computer, Inc.

18 During that time period there were a number of ITD  
19 deployments worldwide, most of which were conducted by  
20 telephone companies using ADSL technology, custom built set  
21 top boxes, custom built servers. Most of those, if not all,  
22 were ultimately written off as a learning experience by the

1 operator. There were very modest ROI projections, which  
2 were not met.

3 I would like to ask all five of you what is  
4 different? Use the time machine and take advantage of  
5 hindsight. What is different between that time period and  
6 now and in what regard to expect the operators, the  
7 distributors, if you will, to achieve a desired return on  
8 investment that would justify continuing interactive  
9 television investment?

10 SPEAKER: I think what has changed from then to  
11 now is, one, you have had the whole Internet phenomena that  
12 has occurred over the last couple years and the explosion in  
13 the usage of people using that, people interacting,  
14 e-commerce has come along. People have gotten a better  
15 taste of how that works.

16 I think at the same time the technology has  
17 evolved a lot to be able to support that. A lot of the  
18 technology that supports all the Internet sites and  
19 businesses that are out there can now be leveraged to  
20 support a lot of the backing for the interactivity, so I  
21 think the technology has caught up a lot.

22 The consumer experience -- they have become more

1     educated and there is -- we have seen what's worked and what  
2     hasn't worked in that environment that we could potentially  
3     port over here, and the hardware on the set top boxes is  
4     significantly improved where it is economical now to be able  
5     to roll it out.

6             SPEAKER: Closed - open - analog - digital.

7             We had a closed environment. If you wanted to do  
8     anything you had to invent it. Today all you do is plug in,  
9     plug into the Internet, plug into interactivity. It is  
10    already set up for you.

11            We are not going to be creating an intranet that  
12    never touches outside. It is going to be inter-net and  
13    leverage the billions of dollars of investment that have  
14    been put in place that didn't exist before, the tens and  
15    hundreds of billions of dollars.

16            Secondly, digital allows an enormous differential  
17    in services, in expanded offering, in pathway of  
18    communication that is completely different than what we had  
19    before. It's a very, very, very different world.

20            SPEAKER: I would add to that one other thing.  
21    The two previous speakers have spoken about cost -- cost of  
22    set top going down, cost of the network infrastructure going

1 down, and cost of content creation going down.

2 Those are all key drivers. The fourth one I would  
3 add is that all of the attempts back then were really  
4 focused on creating a destination environment and I think  
5 while that is compelling and there is clear evidence that  
6 that can generate revenue in and of itself, I think the new  
7 vision for TV, enhanced TV, is that the interactivity is  
8 tied to television as you already know it. You are not  
9 being asked to not watch TV and go interact somewhere. You  
10 are being asked to interact in conjunction with what you are  
11 already doing, and that is I think at a much lower barrier  
12 for consumers.

13 SPEAKER: I think in general the modern enhanced  
14 television service, whether it is personal television or  
15 enhanced advertising, et cetera, is much more focused on  
16 appealing to the end user and delivering value that the end  
17 user can appreciate. If you look at the applications that  
18 are being so successful in Europe, if you look at personal  
19 television here in the United States, these are things that  
20 viewers get very excited about and very involved in and they  
21 want to use, and that allows you to derive a lot of  
22 interesting revenue streams that weren't possible in the

1 past.

2 MR. KNUDSON: Thanks.

3 MS. HOLLOWAY: My name is Kate Holloway. I do  
4 business development in the Advanced Media Division of  
5 Engage, CMGI company. Is this still on?

6 MR. KNUDSON: Yes.

7 MS. HOLLOWAY: I have two questions. They are  
8 sort of related.

9 The first one is we let a whole lot of -- a set of  
10 opportunities for different kind of media units within  
11 interactive television like overlays, bar, banners, and my  
12 first question is do you think that these particular media  
13 units are going to be seen as an ROI vehicle or as a  
14 branding vehicle primarily?

15 The second, related question is do you think that  
16 we are going to be seeing this media bought by Internet  
17 media planners or by folks that buy TV, and as all of you  
18 are surely aware, those media planners typically live in  
19 different parts of the building right now and don't really  
20 even talk to each other, so your thoughts on that?

21 SPEAKER: I will take a stab at it. You know, I  
22 think you can look at the trends and see what's happened on

1 the Internet and how popular banner ads were at the outset  
2 and how let's say less popular they are now. I mean they  
3 are intriguing at first and to the end that a banner ad or a  
4 piece of new media can lure people in and support the  
5 television experience in this environment I think they will  
6 do okay.

7 I agree with the panelists' earlier comments but I  
8 don't think that is the strongest revenue driver on this  
9 platform. We get inundated. It's always been, you know,  
10 the television industry has always been driven by  
11 advertising but it is so well suited to the medium itself  
12 that to put interactive banner ads on top of an interface of  
13 some kind could almost be intrusive to the viewer, so I  
14 think we walk a fine line in presenting that in a way that  
15 ads to the experience and not detracts from it.

16 SPEAKER: We certainly believe that there's going  
17 to be a significant increase in inventory as these platforms  
18 are developed and that inventory is going to come in various  
19 flavors. Some of it is going to be new 30-second spots.  
20 Some of it is going to be new five-minute infomercials.  
21 Some of it is going to be banners and overlays and sidebars  
22 and things like that, and I think they are going to be used

1 for all sorts of different purposes by all sorts of  
2 different advertisers including content providers and  
3 content distributors as well as traditional advertisers.

4 I think there is no question if you look at the  
5 people at Gray or at Omnicom that are doing business with  
6 Replay TV, they are the television people. They are not the  
7 Internet people, and it is clear to me that our inventory is  
8 going to be bought by television media planners.

9 SPEAKER: I actually think that it really depends  
10 on which interactive TV service you talk about.

11 I think if you look at a replay 30-second spot  
12 that might be downloaded to the hard disk or if you look at  
13 an enhancement associated with a spot that you have already  
14 bought media for, such as the WINK enhancements, those are  
15 most likely going to be handled by the existing TV media  
16 planners.

17 On the other hand, I think if you are looking at  
18 buying media into a walled garden, that is much more akin  
19 with a broadcast Website and I think that you could very  
20 well argue that the Internet media buyers are better  
21 equipped from a tools standpoint to evaluate those  
22 opportunities, but in the end it will just be decided by

1 politics.

2 MR. KNUDSON: Next question?

3 AUDIENCE PARTICIPANT: Cable Labs is talking about,  
4 setting open sourcecode for middleware and I guess I have  
5 two questions.

6 Number one, is that realistic? -- and number two,  
7 if it is what are the implications for the five or six  
8 different providers that are all trying to be that  
9 middleware?

10 MR. KNUDSON: Great question. No answer. Sorry.

11 [Laughter.]

12 SPEAKER: I can answer. I don't think we are very  
13 good at setting standards. I don't think it is going to be  
14 very easy to force the very large interests, powers that  
15 exist right now to force a standard, and I think people  
16 right now are very apprehensive to make large-scale  
17 commitments to a standard and want to wait, watch, test,  
18 try, play things out a bit before they are willing to make  
19 any moves like that, so I don't think anything material is  
20 going to happen along those lines for awhile.

21 SPEAKER: I think the vision behind what you are  
22 talking about, just to explain, the vision behind open cable

1 was that you could potentially instead of having a bunch of  
2 different operating systems, you could have an open source  
3 operating system that would be freely licensed and that  
4 could be used by any manufacturer to develop an open cable  
5 box, and then you would have middleware providers sitting on  
6 top of that, Liberate and Microsoft, et cetera.

7           It is an intriguing vision. It would preclude  
8 somebody from gaining the kind of control of the box that  
9 Microsoft has in the PC today, but because of the complexity  
10 of putting these systems in, I think that it is ultimately  
11 somewhat utopian, because it is so hard to do already that  
12 the concept now on top of that, trying to establish all  
13 these different layers where all the APIs have to be  
14 separable and you can plug and play and throw everybody in  
15 and out of the box, you know, that is going to be extremely  
16 difficult.

17           I think you are going to see fairly integrated  
18 solutions from the major suppliers.

19           SPEAKER: I would agree about that.

20           SPEAKER: I think it is going to be very tough  
21 because every network operator is going to have a different  
22 content model they are going to follow and I don't believe

1 that there will ever be -- ever is a long time -- but there  
2 will be a middleware solution that will accommodate  
3 everyone's needs.

4 We see some operators going with middleware  
5 solutions that aren't even taking the whole package. Some  
6 of them are taking some of the pieces and then going to a  
7 different e-mail for example, or a different e-wallet  
8 provider.

9 With every new flavor of content model that a  
10 network operator deploys, that requires some level of  
11 integration on the part of content providers and the rest of  
12 the industry to get that running across multiple networks.

13 MR. KNUDSON: We have time for about one more  
14 question if anybody wants to ask.

15 MR. TODGRASS: Tim Todgrass and I am with ETV,  
16 which is the Swedish equivalent of Open in the UK.

17 Walled gardens are -- I can see the attraction to  
18 distributors but I can't quite understand what makes them so  
19 compelling to users.

20 You know the distributors don't have a monopoly on  
21 the design skills that are required to make very compelling  
22 applications and I would just like to push guys to the next

1 level and tell me why, what makes walled gardens so  
2 compelling to the users and why do we expect to see more of  
3 them in the open digital world?

4 .SPEAKER: Eighty-seven percent of an AOL user's  
5 time is spent in the walled garden of AOL. The majority of  
6 an Excite at home user's time is spent within the Excite  
7 offering -- Excite at home offering.

8 People, in my opinion, don't generally want to go  
9 to a thousand web pages. Maybe you do. I don't. I don't  
10 know a lot of people that spend time on more than five to  
11 ten Web pages, and I have a pretty intelligent group of  
12 people I know. The challenge, generally speaking, is people  
13 want the choice or the appearance of choice but don't  
14 necessarily want to take the choice.

15 You want to know that the bookstores aren't going  
16 to charge you more than the fair price but you still go to  
17 Amazon even though it is not the cheapest, and that is what  
18 happens in general, is people want the appearance of choice  
19 and if you give them a solid appearance of choice I think  
20 you can satisfy most of their needs, maybe 87 percent of  
21 their needs.

22 .SPEAKER: I would add to that that the experiences

1 in Europe are perhaps not completely comparable to the U.S.  
2 PC penetration is far lower, online usage is far lower, and  
3 so we have a perhaps less educated user base with fewer  
4 alternatives.

5 In the U.S. I think most of the people who are  
6 inclined to seek information proactively are probably  
7 already on the Internet. That will make it more difficult  
8 to keep people on the walled garden in the U.S. than perhaps  
9 in some parts of Europe.

10 I think, secondly, sometimes you don't have a  
11 choice. I mean there -- we talked a little about the next  
12 generation platforms. Well, the platforms that cable is  
13 doing today you aren't going to be surfing the Internet on  
14 them, so the only choice of providing a destination type of  
15 platform is to deliver a walled garden and so you will  
16 definitely see it there.

17 Once you are in a box that supports a broader set,  
18 then there will be a business tradeoff between are you  
19 alienating your users by restricting choice versus the  
20 business benefits of keeping them in the garden. I think  
21 you will see people leaning towards keeping them in the  
22 garden, as Craig said, because you have to give people the

1 choice but you have to give them a few stores to walk  
2 through first.

3 SPEAKER: In 1996, in my inestimable wisdom, I  
4 decided that the Internet meant that AOL was dead. I mean  
5 after all, who was going to stay in the walled garden of AOL  
6 when they had the whole Internet to choose from?

7 I appear to have been slightly mistaken and I  
8 think the same is true of the walled garden concept in  
9 interactive television. People like it. I don't understand  
10 why, because I don't like it, but you don't build products  
11 for yourself. You build products for the mass market and  
12 the mass market likes a safe, comfortable, supportive  
13 environment and it is all about the illusion of choice and  
14 control, but they don't really want the choice and the  
15 control. They want to be taken care of.

16 SPEAKER: Right. I think people that want that  
17 being able to go wherever they want, the PC always exists as  
18 a platform for them to be able to do that.

19 The television environment, living room  
20 environment, you may not have a keyboard, you just have a  
21 remote, the requirements to keep it a very  
22 consumer-friendly, a mass market environment, I think you're

1 going to want to have much more control.

2           You know, if you don't have the option of doing --  
3 downloading plug-ins or rebooting a PC when a piece of code  
4 doesn't work, you need to make sure that is a much more  
5 stable environment.

6           SPEAKER: Right, and I can tell you we have been  
7 intimately involved with the development AT&T's walled  
8 garden offering and seen some of the viewer reaction to it  
9 at the outset and they love it. It's a very comfortable  
10 environment for them. It's an opportunity for them to learn  
11 a few simple skills about navigating their television and  
12 insomuch as they can transfer those skills into new  
13 interactive applications that are within this walled garden,  
14 that is a comforting experience.

15           I think it is more of a browse proposition than a  
16 search proposition that we see on the Internet.

17           MR. KNUDSON: Okay. Well, there's no further  
18 questions.

19           I would like to thank our panelists. It was very  
20 informative and have a great show.

21           [Applause.]

22           [Whereupon, the session was concluded.]

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[SPEAKER: This concludes this session, which was professionally recorded by Sound Images of Englewood, Colorado, (303) 649-1811.]

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