



**Cisco Systems**  
**Podcast Transcript: Visual Networking w/ Service Providers**  
**With Bob McIntyre, Chief Technical Officer, Service Provider Group**  
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**Peter Shaplen:** Welcome to this podcast series, an ongoing conversation about trends, technology and business. For Cisco, I'm Peter Shaplen. Bob McIntyre is the Chief Technical Officer for the Service Provider Technology Group at Cisco and the conversation today is about visual networking inside the connected home and Cisco's vision. And Mr. McIntyre, welcome to the program.

**Bob McIntyre:** Thanks Peter, great to be here.

**Peter Shaplen:** Explain for us, for those who really don't yet understand the term visual networking; what is it, what does it look like?

**Bob McIntyre:** Well there's a lot of terms that are thrown out today about how to connect your life together inside the home. Some people use the term connected home, some people use the term connected life; we like the term visual networking, because what it does is it ties together all the pieces of the home with high quality video. Video you can watch where you want to watch it, when you want to watch it and how you want to watch it. Now, if you can tie that video together with data or even voice, now you've got something really powerful. I'll give you some examples. You know one of the manifestations of that we see happening in the future is watching your favorite TV program live, perhaps as broadcast, and having your social network or your community chatting with you at the same time you're watching television. Now you can do that today if you happen to have a wi-fi network in the home, if you happen to have a laptop that sits on your lap in the living room, but our view of the world is one of the best ways to do that kind of chatting and maybe even see who your friends are that are online is to actually put it up on the TV screen where the program is playing. You can be talking to your friends unobtrusively without a laptop on your lap, through the same network and making the experience far more fun 'cause it becomes a community.

**Peter Shaplen:** It's essentially connecting the individual pieces of machinery; you're talking about making them work seamlessly with one another.

**Bob McIntyre:** We find that one of the best ways to tie all these things together is to tie it together from the network and give the keys to the service providers, let them sell it as an application service, and what you find is because the most of these service providers know how to do a good job with video and media. They've been doing it for years; the experience for the consumer is always much better. And so we've actually coined the phrase, it's no longer a service provider that we sell to - it's an experience provider. And that's where we're headed in the network of the future inside the home. Consumers keep wanting more; we're going to give it to them.

**Peter Shaplen:** So how do you educate the consumer? 'Cause here we come up very close to CES, there's a lot of talk. How do you educate the consumer and how do you help the service provider become that true experience provider to sign up and embrace this? It feels a little bit like a chicken and an egg proposition of what comes first.

**Bob McIntyre:** The things that got in the way in the past of this perfect storm: cost of the TV sets was one, and had problems fixing itself. The availability of the programming was another one, because a lot of studios five years ago weren't producing in high def content format. And the third thing is they have to have access to a network that can deliver the HDTV. So that's where the service providers come in. Almost every major service provider is providing multiple channels of HDTV now. The access to those channels is absolutely critical. What that means is that the set-top that goes into the home to provide this visual experience has to have the capability of decoding HDTV. Well, we've been shipping HDTV capable set-tops to provide this experience for a long time now; it's been four or five years. They pay a little more, but it's usually worth the experience. You're going to see a continually improving quality of content driving this visual networking experience and it's going to continue to get better. Driven by sports, driven by consumer demand, driven by the programmers who want to stay competitive; they don't want to have programming content that two years out is obsolete because it's only in standard definition format, so most everybody is shifting to HD content.

**Peter Shaplen:** But where does Cisco fit into that equation?

**Bob McIntyre:** Well, HDTV takes five times as much bandwidth roughly as a standard definition digital signal. So the network has to be capable of providing access to more bandwidth, that's why networks have to be managed in such a way that you can get all those channels in there. With this increased bandwidth. The second thing is the network has to be good enough that it doesn't disrupt or distort the video when it gets to you.

**Peter Shaplen:** Service providers need the network for the bandwidth for the speed, but they also would need the network in order to provide all of the enhancements you spoke about. Do you think the public is actually getting that yet? Do they get the concept of it, not just the service; are they seeing what's possible and what it will take for them to not only to see it but say I want it?

**Bob McIntyre:** I think that today the service provider's key role is to offer these applications and services and do it seamlessly. And what I mean by that is the consumer doesn't care what kind of a network it runs over, what they really want to know is that when they get that video that they paid for or subscribed for that it shows up, it's a very high quality video, the lips are in sync and it's a satisfying experience. There's no artifacts, there's no dropped packets and it shows up just the way they want to see it. All those tricks of quality of service are built into the network and would be very difficult to do just at the endpoint.

**Peter Shaplen:** Last year at the Consumer Electronics Show Cisco made a great deal of the announcement about what was being talked about; connected life, lots of connectivity within the home, and it's been pretty quiet since then. What have you been doing the past 12 months and where are you going in the next 12 to 18?

**Bob McIntyre:** What we've been doing this last year since CES is we've been talking to our customers who help us prioritize where we put our resources, and several things have come out of that that are pretty interesting. One concept is a gateway. You have to have a modem in the home to provide broadband services. Wouldn't it be great if you could take that modem and adapt it using some of the tools that we have with Linksys and Scientific Atlanta into a gateway device that would not only give you broadband service but could help connect together on a physical layer many of the other devices you have in the home.

**Peter Shaplen:** When are we going to see our first gateway units and what are they going to be capable of doing?

**Bob Shaplen:** The first gateway units will be rolled out in early 2008 and we're announcing at this show the first of our commercially available products that are gateways. The gateway will be truly a way of accessing the internet with high-speed data and being able to extend it to other devices inside the home. So if you want to connect the TV to the PC, do it through the gateway which might have multiple ways of doing it. And the reason you'd want to do that is you'd have the gateway control those connections, the gateway monitor those connections, the gateway may someday actually have a hard drive in it so it could actually provide storage for multiple devices in the home.

**Peter Shaplen:** It's a Trojan Horse.

**Bob McIntyre:** It's a Trojan Horse, exactly right. Because once you get it and once it's stable and once the customer is happy with you as a service provider then you can use the up-sell effect. More premium channels, perhaps streaming video, higher broadband speeds on the data network and that bundle all packaged together really allows you to be competitive. So that's one concept that's coming to a forefront in the last 12 months. And so the other concept that's come up is hybrid set-top solution, a hybrid visual networking experience that would allow you to not only bring analog channels, digital channels, video on demand services to the TV set, but also allow you access to streaming video from various types of websites or sites that you might want to buy. Delivered both to the PC and also to the TV set. So that's the concept of a hybrid box. Those come out of these discussions at the Consumer Electronics Show. Those types of applications that go across platforms are really important to the consumer. And the way I like to say it is if you're the service provider who has that feature or that application and the other guys don't, then you win.

**Peter Shaplen:** You listen to your customers. Or try to listen and clearly you're hearing a lot. Is it a matter of hand-holding the service provider or leading the service provider, or being a pioneer with the service provider?

**Bob McIntyre:** I'd like to think that we pioneer with them. In many cases the service providers have a vision, they have a strategy. And in some cases we follow. But again it's because we listen to them. Especially with some of the smaller providers, they like it when a company like Cisco comes to them and says "here's a way of doing what you want to do, how can we help you do it?" And that gets to the end solution because at the end of the day the company that can give them all the pieces that they need, put it together for them and help them make it work and satisfy the consumer is the only way they're going to grow their business and that's what we try to do at Cisco.

**Peter Shaplen:** Can we check in with you in another six months to a year and see how it's going?

**Bob McIntyre:** I would love to do it and we got another Consumer Electronics Show happening; it may be something that we'll learn some more.

**Peter Shaplen:** We'll look forward to hearing what the service providers and other customers are telling you as you listen to their questions.

**Bob McIntyre:** Okay, thank you.

**Peter Shaplen:** Bob McIntyre is the Chief Technical Officer for the service provider technology group at Cisco. And thank you for speaking with us.

**Bob McIntyre:** Thanks, Peter.

**Peter Shaplen:** And thank you for listening. You will find more on this subject, as well as a listing of other podcasts online and at [newsroom.cisco.com](http://newsroom.cisco.com). I'm Peter Shaplen, for Cisco.