URL: https://stvp.stanford.edu/blog/videos/the-future-of-appliances

Wirt makes some interesting predictions about the future of digital music, digital photos, and the trends of high speed networks and increasing storage capacity. He describes a world where almost everything has a built-in hard drive for storing information, but the challenge will be keeping it all in sync.

Transcript

So what kind of implications are there in the future, you know? What does this mean for the future of appliances? What could we look forward to see happening as we go on? Well one of the key things if we look at trends that are really happening out there in the marketplace, you know, it's obvious that when networks whether we're talking about high speed cellular networks, we're talking about WiFi or Wi-Max is, you know, this is a key trend.. And how could this play out in an appliance where only, you know, we've got some email appliances rights about Blackberrys kind of an email appliance.. Thus the primary role of these reasons that's got a keyboard on it is for email.. You've got, if you think about it, you know, music in the sky kind of product where you could say, "Okay I'm not going to have to buy all the music I want but if I could listen to a song or a playlist anytime I wanted without actually, and you know pay a little fee for that without actually buying the music and downloading it, owning it.. Who cares if I own it as long as I can listen to it whenever I want?" But that would be a very different product.. I mean this is an audio product.. It could be a tiny little product with almost no display and it's got, you know, and he hooks some headphones up to it and that's it.. Running out an audio network where this is got to have a nice display as you can read the email and a keyboard.. You know you could design those to be very.... You would need design those to be very different products..

How about photos, you know everybody's got digital photos now.. You could have access to those photos anytime anywhere and you don't need to print them out.. You could always show them.. The other people that you show them to could have access to them, well that would be a different kind of product too.. You need a nice display on that so you can get a good quality picture probably a better display than you've got on this when you're just doing primarily text than this one where you have, all you need to really see is that, you know the name of the song.. And you can have something where, you know, the bottom line here is probably everything is going to be connected.. So it's not obvious that you've got one product that's a phone that's going to be able to do all this cause if you put a giant display in it and the audio and the keyboard, you probably wind up with something that's maybe it's not such a great phone whereas each of these individually could be really great at doing the thing that you want to do.. The other key trend that's happening in addition to the high speed networks that would be everywhere is storage.. And I think a good example of this is really what's happened with Optical and you could say, "Well, how come we don't have optical servers in our house that's got a juke box kind of thing." I can listen to my CDs and I put on my DVD discs in there and I can access it from all around the house.. What's happened is as I mentioned, I get 16 optical drives, it turns out, you know, people like convenient stuff..

They, you know, all that networking stuff is pretty hard.. It's a lot easier for me to just but that CD player that goes into my car and I take my CD with me and I want to listen to the car and put it in the CD player.. That was pretty easy.. Looking forward, I think we can imagine that pretty much everything could have hard drives in it.. In the concept to having this one giant server and with the exception maybe of movies, which take up a lot of space, I mean it's pretty hard to fill up 40 gigabytes of space.. You know, you got music.. I mean most people, even music, which takes up a lot of space, the typical music collection is like under 4 gigabytes in size, which is why I don't think it's a coincidence that the mini Ipod is like 4

gigabytes.. Most people, probably not the people in this room, but most people don't have that much music and they digitize it all, like less than 4 gigabytes.. So if you had an inexpensive 20- or 40-gigabyte hard drive, I mean you could carry pretty much everything you wanted to have with you.. And if the price came down, I mean you don't need one big one you probably want to have 14 or 20 little 40-gigabyte hard drives..

Question there is how are you going to keep everything in sync? You know, so you don't have to always copy it around.. So I think there is an opportunity in the future, if you go with the appliance approach you'd say, "Well we're going to have different kinds of appliances here and maybe each of these is also going to have a hard drive in it to hold all my stuff then how am I going to keep everything in sync?" Is the question that you're left with.. So the real question is if we don't keep everything in sync, you can wind up here as kind of road kill on the information super highway that might be an information side street over here.. But the question as you move forward is, you know, is it going to be a convergence device? Is it going to be an appliance? If it looks like the appliance approach, how do you keep all your information in sync?..