Stanford eCorner

From Revolution to Evolution

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A revolution in technology can occur very quickly, says Wirt. The new product can rapidly displace the old. However, the evolution of a technology takes time. The potential impact of a technology is not often realized until much later.

Transcript

What is the life cycle of technology and how does that apply really to the evolution of technology and products and in particular this is something we think about at palmOne virtually every day which is how are PCs and PDAs and phones going to develop in the future? What's that one thing that's going to win or is it going to be some combination of these things or how is this really going to play out? If you look back at couple of historical examples I gave, the revolution something comes along like the electric motor and replaces the steam boiler and what happens is really that that new technology almost immediately displaces the old technology. They ripped out the steam boilers, they put in the dynamo and you say "Well, you know that's great. It made a big change" but really the usage model didn't really change okay? We're not buying shoveling coal into the basement anymore but we still have the belts in and pulleys and what really happens as you get to the evolution part is, it takes time. It's not just swapping out this one thing but you have to have a system change so you have to be able to say, "We're going to take this little motors and build them into machines and we are going to change the way the building is laid out to really make it a solution. We had to rebuild the factories; changing those buildings out took about 20 years because a solution is really is the entire system of changes. It's not just swapping out that one piece of technology. So a lot of times when you see though the initial change, you know you will say, "That's it!" It's that one thing but it's not really that one thing. The things have to change around it. I think a good example of this today is mp3. It came out with mp3 players and people say, "That's it for music." You know music is over and when Napster was around, everybody's going to be stealing music, what's going to happen to record companies and it took a while.

It took time for companies to create good interfaces, a good system like an iTunes or Rhapsody or something like that. They have to do license deals with the music company. You had to have devices that could hold more music, you had to have micropayments. If you try to do these 4 years ago, you probably wouldn't have many any sense to charge something for 99 cents on a credit card bill, the credit card charges could have been too high just to process it. So it's about getting the system changes in place. To really understand the full impact of the technology.