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Biography

Anatole Gershman joined Accenture Technology Labs in 1989 and in 1997 became its overall Director of Research. Under his leadership, research at the laboratories is focusing on early identification of potential business opportunities and the design of innovative applications for the home, commerce and work place of the future. These include electronic commerce, high-performance virtual enterprise, knowledge management, and human performance support. To achieve these goals, the laboratories are conducting research in the areas of ubiquitous computing, human-computer interaction, interactive multimedia, information access and visualization, intelligent agents, and simulation and modeling. Prior to joining Accenture, Anatole spent over 15 years conducting research and building commercial systems based on Artificial Intelligence and Natural Language processing technology. He held R&D positions at Coopers & Lybrand, Cognitive Systems, Inc., Schlumberger, and Bell Laboratories. In 1997, Anatole was named among the top 100 technologists in the Chicago area by Crain's Chicago Business. In 2000, Industry Week named Anatole one of the "R&D stars to watch." Anatole studied Mathematics and Computer Science at Moscow State Pedagogical University and received his Ph.D. in Computer Science from Yale University in 1979.

Research Interests

The development of the infrastructure for ubiquitous computing is progressing rapidly, yet the applications that will be built on this new infrastructure remain largely ill defined. What will we do with these emerging capabilities? Full-color stock quotes on your heads-up display? Stereo sports scores? We believe that the new kinds of services will result from three primary capabilities of ubiquitous devices:

Ubiquitous Devices as Service Channels

Perhaps most obviously, mobile and embedded devices represent a new, constantly present, personal service channel. While this certainly opens up a new marketing channel for existing services, more interesting are the new kinds of services that will make sense. Once we can assume an always present, always-on channel, access to a person goes away as a constraint. So now services can, in effect, casually tap on your shoulder and whisper in your ear rather than blare random aimed at thousands. But what should these new services whisper? And how will this newfound access be managed across competing interests?

Ubiquitous Devices as Sensors

Today's mobile devices are essentially deaf, dumb, and blind. Service providers depend upon users to enter all necessary information. Consequently the services available today are essentially those that can be delivered despite these rather drastic limitations. Over time, however, ever more powerful mobile and embedded devices will become equipped with a variety of sensors. Geopositioning capabilities will inform devices of their location. Biometrics will identify the user. Tagging and tracking technologies will identify the objects around them. In short, ubiquitous devices will begin to open their eyes and as a result we will begin to see services that don't depend upon the user to establish, interpret, and communicate their own situation.

Ubiquitous Devices as Effectors

The mobile commerce trend is not happening in a vacuum. Just as millions of people are acquiring mobile phones, millions of objects of various kinds - kiosks, displays, cars, appliances - are now acquiring wireless capabilities of their own. Ubiquitous computing is becoming a reality. We believe an area of great opportunity lies in the interaction between these trends. In particular, the mobile device, by virtue of its presence on one's person, has the chance to be the user interface for the myriad of intelligent objects we find around us. Today we can point a phone at a soda machine and buy a Coke. Soon we will be able to point to a far larger array of objects and receive supporting services. In effect, the mobile device becomes a "remote control to the world".

These capabilities - the ubiquitous device as service channel, sensor, and effector - can be combined to change the way we think about services.