Proactive Computing

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Computing

Responsive

Reactive

Proactive
Early 2000s

J.C.R. Licklider: Interactive Computing

Figure 1. The four quadrants of ubiquitous computing.

- Proactive
  - Pervasive
  - Human-supervised
- Interactive
  - Office/Document
  - Human-centered
- Manual vs. Autonomous
- Office vs. Field
Early 2000s - Three Directions

Getting Physical

Getting Real

Getting Out
Around 2003 - Design Principles

- self-monitor
- self-heal
- self-configure
- environment
- improve performance
- defend against attack
- communicate
- aware of the
- anticipate user actions
Around 2003 - Research Projects

1. Labscape

2. Personal Server
Around 2003 - Labscape
Around 2003 - Labscape
2008: Spatial Conditions and Interactions

1. Location

2. Orientation

3. Motion

Figure 1. The Concept of Spatial Conditions
2008: Gateways, Drag and Drop
2009 and now:

1. More people are connected to the digital world for more time
2. Advertising is effective
3. Users demand more information and more quickly
4. Computation is getting cheaper!
Proactive Health Care
Thank You!

I think my Nest Smoke Alarm is going off. Google Adwords just pitched me a fire extinguisher and an offer for temporary housing.