A Brief Survey of Wearable Applications

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Agenda

• Discuss several existing users and their application of ViA’s Wearable computer system
  – Ford Motor Company
  – HP Medical/NCR
  – U.S. Navy
  – U.S. Navy Air S
  – NYSE/Bear Stearns
  – Boeing
  – Major Hospitality Company
• Discuss opportunity for standardization and the benefit to these applications
Ford Motor Company

The Ford Motor Company has been key in supporting ViA product development for Wearable systems.

Ford’s “Factory of the Future” programs use the ViA Wearable for paint inspections tasks and assembly operations.

HP Medical/NCR

The Wearable has been used in patient monitoring. Using non-invasive sensors attached to the patient, information was sent to remote physicians on an Intranet for immediate consultation and critical feedback.
NCR

"We have worked closely with emergency medical technicians, military medics, nurses and physicians in urban, suburban, rural and military settings and have based our design requirements on information obtained from those users.

"We believe that the Wearable computer from ViA can help address these user needs."

Tom Holzman
NCR Trauma Care Information Management System Project Leader

U.S. Navy (SEALS)

ViA’s military partner, Computing Devices International, conducted Wearable pilot demonstrations for the Navy SEALS in three phases:

- Pre-dive checkout
- Global positioning
- Digital image capture, display, modification and transmission

A demonstration has also been conducted for the Secretary of Defense and by the military as support for English-to-Croatian language translation in Bosnia.
U.S. Navy (NAVAIR)

- ViA is the prime contractor for an SBIR contract with the U.S. Navy Air Systems Command to research and prototype the application of wearable systems to Logistics and Air Crew operations.

  The SBIR contract include implementation and evaluation of several capabilities:
  - Checklists
  - IETMs
  - Moving Map/GPS
  - Remove UAV operation

NYSE/Bear Stearns

Automating the trading process.

In April ‘97, the ViA Wearable was used in live tests on the AMEX floor.
Boeing

- Outfitted in ViA Wearables with voice recognition and Virtual Vision head-mounted displays, Boeing aircraft inspectors addressed quality concerns and reduced inspection time from five days to one.

Hospitality Company

- Although this particular customer prefers to remain anonymous, the application involves the use of ViA’s Wearable computer to “enhance the guest experience.” Operations will be performed remotely, including:
  - check-in/check-out
  - reservations
  - concierge services
  - profile maintenance & tracking
Standardization Need

• A continuing concern is focussed around connectivity of peripherals
  – comfort
  – safety
  – cost
  – reliability
  – ease of use
• Each and everyone of these customers has expressed interest in a wireless solution for peripheral connectivity

Functional Requirements

• Mobility: 0-10mph
• Power Management: Very Low current consumption
• Range: 0-10 meters
• Speed: 19.2 - 100Kbps (actual)
• Small Size e.g., ~.5 cubic inches no antenna
• Low Cost: i.e., relative to target device
• Should allow overlap of multiple networks in the same area
• Networking support for a minimum of sixteen devices